

Innovative learning environments and discourses of leadership: Is physical change out of step with pedagogical development?

Jennifer Charteris¹, Dianne Smardon¹ and Emily Nelson²

¹University of New England, Armidale, NSW, Australia, ²Eastern Institute of Technology, New Zealand

Abstract

School leaders are at the forefront of reform agendas. They are challenged to embrace digital technologies, rethink the roles of students, teachers and school leaders, remodel physical spaces in schools and consider significant shifts to school administration and leadership. In this article a theoretical framework of learning leadership, relational trust and risk-taking is evoked to examine how leaders broker change to implement Innovative Learning Environments. The research reported in this article provides an analysis of pedagogical, instructional and learning leadership discourses drawn from the qualitative data in a survey that involved 165 Aotearoa/New Zealand school practitioners. Findings suggest the value of positive and critical leader engagement with the discursive nexus of education policy and economic rationalism. The research addresses the paucity of research on principal perceptions of ILE and the challenges this policy direction presents for leadership.

Keywords: *Relational trust; innovative learning environments; pedagogical leadership; instructional leadership; learning leadership*

Introduction

The first two decades of the 21st century have been marked by profound shifts to knowledge-based structures where barriers to participation and knowledge have been broken down (Lee, Markotsis & Weir, 2002) for those who have access to digital technologies. Consequently, with the swift development of emergent technologies and speed of globalisation, there have been significant economic, political, social and technological transformations for education. Schools, like other organisations, are swept up in these winds of change. Transformations are conceived as both desirable and inevitable. Yet, with the speed of the shift and the political interests of global capitalism driving it, the discourses that reify economic rationalism must be critiqued where they intersect with education.

The three authors of this article are teacher educators with a background in both teaching, leading, and teacher learning and professional development (PLD) provision in Aotearoa/New Zealand (NZ) schools. Interested in the nature and purpose of schooling change, this article investigates leadership discourses in NZ schools in the light of policy borrowing innovations (Steiner-Khamsi, 2004) around the implementation of Innovative Learning Environments (ILE) (OECD, 2015a). Emerging from the Organisation for Economic Co-operation and Development (OECD), these borrowed policies have had a significant influence on the NZ education system over the last ten years, and currently are influencing a push towards ILE or flexible learning spaces and associated pedagogies. These initiatives have their origins in global education reform discourse that is driven by economic imperatives and improvement science (O’Neill, 2015).

The conception of the knowledge economy (Gilbert, 2005) underpins notions of ‘twenty-first century learning’ (Benade, 2015), learner agency as embedded in NZ Curriculum Key Competencies (Charteris, 2013; Hipkins, 2012; Ministry of Education, 2007), and the current OECD (2015a) policy trend toward ILE. In NZ, the review to the Education Act (1989), school property reform to embed ILE (Ministry of Education, 2015a), and proposed changes to school governance ushered in through the Investing in Educational Success initiative (Ministry of Education, 2015b), indicate a period of far reaching change. This change is so profound that it can

be compared to the historic events of 1989 and the Tomorrow's Schools reform agenda that saw the dismantling of the centralised administration of education and a move to self-managing schools (Department of Education, 1988).

ILE are an initiative that suggests a transformation in how schools are conceptualised, in keeping with a vision for digitally connected 21st century schooling. Building on the work of Benade, Gardner, Teschers and Gibbons (2014), who highlight that with principals challenged to shift toward digital pedagogies and embrace ILE there is continuing need for exemplary leadership, this article considers how school leaders are responding to calls for innovation. In the following sections, literature on ILE, learning leadership, collaboration, and relational trust are presented to locate our research within the contemporary change milieu. Survey responses from principals are analysed for the leadership discourses they suggest, in order to leverage a discussion on the nature of leadership required for ILE, implementation. In the latter part of the article, implications are considered for principals, who as agile experts, must work in systems with high adaptive capacity (Muijs, Kyriakides & van der Werf et al., 2014).

Innovative learning environments

Emerging technologies and architectural designs for learning along with the ubiquity of anywhere/anytime learning have influenced the development of ILE. In ILE, learning can be “social, situational, experiential, connected and continuous” (Frith, 2015, p. 15). This means that ILE reflect a move to rethink spatial relationships and reframe schooling in keeping with the discourse of 21st century learning. Benade (2015) defines in detail the characteristics of this discourse.

‘Twenty-first century learning’... is a discourse that grows out of the idea of a ‘knowledge society’, and includes an explicit critique of current educational structures and processes, suggesting that these fail to prepare students for the envisaged future. (p. 936)

Swept up in the impetus to be globally competitive economically, ILE have been appropriated by politicians and policy makers to herald the need for urgent change in educational provision (Ministry of Education, 2015b; OECD, 2015a). As a change lever (Benade, 2015), ILE suggest the potential for profound changes to the pedagogical core of schooling: that is, in the roles of leaders, teachers, students and community and the development of influential learning ecosystems as relational connections within and beyond the school (OECD, 2015a). The NZ Ministry (2015a) prioritises “enabling 21st century learning practices through the provision of ILE, improving evidence-based investment decisions and increasing efficiencies” (p. 36). This strategy is proposed to “help us work better together, with the sector and across government as well as making savings” (p. 36).

The imperative to change for “increased efficiencies” is embedded in the neoliberal discourse of the powerful Global Education Reform Movement (GERM) (Conway, 2013; Sahlberg, 2011) and has its roots in the OECD (2008) drive to inform practice, leadership and schooling reform in line with economic imperatives. Neoliberal discourse shapes us through ideology as ubiquitous as the air we breathe. Human capital theory (HCT) links the commercialised self to education, thus providing a bridge between economic and education imperatives.

HCT is premised on the conception that improved education is a key factor in fuelling economic growth. Education is aligned with the productivity and earning of individuals and can be viewed as an investment. It draws attention from policy makers and politicians who engage in education policy borrowing to leverage the economic competitiveness of nation states (Harris & Jones, 2015; Tan, 2014). In these nation states, populations are constituted as neoliberal individuals, imbued with the mentalities of the market and immersed in the rhetoric of accountability, quality assurance, equity and transparency. In this milieu individuals are managed and become self-managing selves who are responsible, self-interested and competitive within increasingly regulated

environments (Foucault, 1988). This commercialised self, “*homo economicus*” (Tan, 2014, p. 436) is integral to neoliberal interests.

Neoliberalism is in evidence in the OECD (2001) definition of human capital as the “productive wealth embodied in labor, skills and knowledge” (para. 2). Istance (2011) links this neoliberal agenda with ILE policy agendas arguing that:

Education has moved rapidly up policy agendas, largely due to political grasp of human capital argument that knowledge and skills translate into economic outcomes. With this has come higher expectations ... about how any one country compares with the others ... [I]t suggests at the least that we need to attend to the nature of learning not just assume that more education per se will meet the economic ambitions. (p. 4)

The conflation of economic and education imperatives within ILE policy suggests that 21st century leadership necessitates addressing competing economic and education discourses to meet the needs of various stakeholders. However, a key tension exists within this confluence; how do leaders balance efficiencies with pedagogical philosophies when grappling with new policy initiatives such as embedding ILE?

Leadership for 21st century change

Leaders who draw strategically from a range of leadership styles to make contextually appropriate decisions are not ensnared in a monocular view of leadership (Mulford, 2008). According to writers for the OECD (2013b), leadership for 21st century learning is about setting direction and taking responsibility for making learning happen. “It is exercised through distributed, connected activity and relationships” (p. 9). As leadership that promotes transformation in school culture, it supports a generation of a shared vision for the future and thus can promote and strengthen “evaluative thinking” (Earl & Timperley, 2015, p. 5) in all those who lead in schools, including teachers and students. For Earl and Timperley (2015), “evaluative thinking contributes to new learning by providing evidence to chronicle, map and monitor the progress, successes, failures and roadblocks in the innovation as it unfolds” (p. 8).

Three predominant leadership discourses circulate currently to frame the types of leadership needed to address 21st century educational challenges: pedagogical leadership, instructional leadership and learning leadership. Key facets of each are presented here. There follows a line of argument that learning leadership is necessary for developing ILE in ways that bring together competing discourses, attend to the learning of students, teachers and leaders and promote sustainability of innovation along both economic and education lines. School leaders face a range of challenges every day that “create the gravitational pull of their schools” (Southworth, 2008, p. iii), and the following exploration of nuances between instructional, pedagogical and learning leadership, is not intended to essentialise leaders or practices of leadership.

Sergiovanni (1998) framed the notion of ‘pedagogical leadership’ as an investment “in capacity building by developing social and academic capital for students and intellectual and professional capital for teachers ... to enhance student learning and development, teacher learning and classroom effectiveness” (p. 38). In using the term “capital”, Sergiovanni evokes an economic discourse that suggests that the only valued outcome of education can be translated into “capital” that can be traded in the marketplace. Apparent in education literature in leadership typologies for the last two decades, instructional leadership forges a link between leadership and positive student learning outcomes. However, this notion of ‘instructional leadership’ has been critiqued for its focus on the ‘what’ rather than the ‘how’ of educational leadership, its need to be more distributed and its emphasis on instruction suggesting a stronger focus on teaching than learning (Bush, 2015).

Where an instructional leader attends to the planning, implementation and evaluation of instruction, a learning leader “focuses on what is learned and how it is learned” (Toll, 2010, p. 50). Much has been written

about ‘learning leadership’ where leaders learn the discipline of leadership as vocational preparation (Bowman, 2014; Orphanos & Orr, 2014). Learning leadership, as a relational activity, can occur at all levels of schools where, at different times, learners “step forward to motivate and inspire others in the pursuit of success and significance” (Bowman, 2014, p. 120). This definition appears to omit the politics of education in the form of the “ongoing struggles with power, inclusion, representation and critical awareness that participants in education experience” (Cook-Sather, 2014, p. 141). However, the term ‘learning leadership’ is used primarily in this article for its commitment to leadership practice that influences and enhances student learning, teacher learning and leader learning and reflects an on-going engagement with related issues of equity and social justice.

Over the last decade there have been a range of heuristics developed in the NZ context that aim to strengthen learning leadership and links between leader practice and student learning outcomes. This includes publications such as the Best Evidence Synthesis (BES), School Leadership and Student Outcomes: Identifying What Works and Why (Robinson, Hohepa & Lloyd, 2009), The Educational Leadership Practices (ELP) survey developed by the NZ Council for Educational Research (Wylie & Hogden, 2010), Kiwi Leadership for Principals: Principals as Educational Leaders (Ministry of Education, 2008), The National Aspiring Principals’ Programme (Ministry of Education, 2016) and the First-time Principals’ Programme (Ministry of Education, 2015c). These initiatives highlight a profound leadership discourse shift, from a focus on pedagogy, to outcomes of student learning. Embedded in this refocus on student learning is an increased emphasis on school leader accountability.

For Robertson (2013), ‘learning leadership’ is more than knowledge acquisition; rather it is about doing something with that knowledge. She suggests that ‘learning leadership’ is about fostering knowledge-creating communities that are “underpinned by equity, social justice, moral purpose, and cultural responsiveness... [and the] ‘leader-as-learner’ is the leader who knows how to learn effectively from leadership practice, and transform through that process” (Robertson, 2013, p. 67). Thus learning leadership requires a learning leader. Within Aotearoa/NZ contexts, learning leadership involves ‘ako’, where collaborative learning and teaching relationships are nurtured within schools. As an inclusive approach to both leadership and learning, ako in Aotearoa involves students, teachers, leaders and communities contributing together to the collective knowledge base in schools (Ministry of Education, 2008). In recognition of the complexity of educational diversity, Rayner (2009) proposes the notion of a “thinking practitioner” engaged in praxis; that is, developing and “using a mix of theoretical and practical knowledge specific to an educational context” (p. 434). In NZ contexts this ‘thinking practitioner work’ functions in partnership with Māori in the spirit of ‘āta’ (Pohatu, 2005). Āta pertains specifically to the building and nurturing of relationships and guides relationships and wellbeing.

Emerging from an ontology that can be equated with the ‘metropole’ or the ‘northern theory’ of dominant western knowledge frameworks (Connell, 2007), there is a focus on schooling relationships in OECD (2013a) research publications. In literature on ILE, learning leadership is understood to be about “actively contributing to the design, implementation and sustainability of powerful innovative learning environments through distributed, connected activity and relationships” (OECD, 2013a: p. 13). The OECD ILE literature (2015a) highlights the importance of learning leadership, trust and learner agency in innovative learning systems. Furthermore, powerful learning environments are seen as “formative organisations” with strong learning leadership – with vision, strategies and design, all closely informed by evidence on learning and self-review” (OECD, 2015a, p. 25)

Leadership is critical to take staffs, parents and communities forward even on long-term change journeys. It means being able to manage the complex organisational environment of creating visibility and breaking down high boundaries that divide schools from each other and their communities, and classrooms from each other. (OECD, 2015a, p. 26)

If leaders are to evoke participatory “change journeys”, and promote powerful learning organisations, it is important to be inclusive, including voices of those with critiques to offer, so that consideration is given to how new practices are power-laden and imbued with the political. Fostering pedagogical capacity and the promotion of deep learning as part of learning leadership for ILE implementation becomes crucial. For the sustainability of any collaborative professional learning initiative that targets whole school change (for instance, ILE and the pedagogical possibilities these potentialise), relational trust is required (Cranston, 2011). To expand on the social dimension of this climate for innovation there now proceeds an elaboration on the element of relational trust.

Collaboration, relational trust and risk-taking

With the rise in expectation around collaborative pedagogy associated with ILE, issues of trust and risk-taking become paramount. Cranston (2011) doubts that substantive school improvement can be achieved without particular focus on the issue of trust. From their longitudinal study of 400 primary schools, Bryk and Schneider (2002) found that deliberate actions taken by principal, teachers, students and parents to reduce a sense of vulnerability in others, that serve to make them feel safe and secure, build trust across a community. Therefore trust is articulated as relational when it is developed around “group norms of safety, risk-taking, and change orientation” (Cranston, 2011, p. 65).

Founded on respect, relational trust thrives when there are distinct role relationships and the mutual dependencies inherent in any school community are valued (Bryk & Schneider, 2002). Relational trust is paramount in ILE where, because of a concomitant shift to collaborative teaching, teachers are dependent on each other to achieve the desired outcomes of quality learning, student achievement and discernible progress. It can be argued that trust is also an important foundation if growth mindsets (Dweck, 2014) – increasingly associated with pedagogical shifts in ILE – are to be adopted by students, teachers and leaders.

Mindsets are our beliefs about human attributes, including abilities. Dweck (2014) tells us that a teacher’s mindset may have more to do with teaching success than natural talent. A fixed mindset inclines toward a belief that basic talents and abilities are fixed traits. A growth mindset holds that challenge is to be embraced, failure is an opportunity to learn, and failure is not linked with a lack of intelligence. A teacher with a growth mindset is more likely to discuss pedagogical issues with others in order to learn from them than someone with a fixed mindset who views airing problems as humiliating or dangerous (Dweck, 2014). Hesitant to innately label students, teachers or leaders of growth or fixed mindset, it is proposed in this article that mindsets can be fluid and contextual and therefore a trust enabling culture is of particular importance for learner agency.

The theoretical framework above signals learning leadership and relational trust and risk-taking as important aspects of brokering change to implement ILE. Against this theoretical backdrop this study uses discourse analysis to investigate how school leaders articulate leadership practices in relation to ILE in their schools.

The research method

The research reported in this article is an analysis of the qualitative component of a survey completed by 165 NZ principals from primary, intermediate and secondary schools. The survey was part of a wider study into professional learning in NZ schools. The study, undertaken in accordance with University ethics procedures, investigates how the three predominant leadership discourses, outlined above, are represented in 27 principals’ comments on the implications of ILE implementation in their respective contexts. This data is drawn from an open-ended question completed by 126 of the principal survey respondents. This question on ILE was framed as follows:

The NZ government describe 'Innovative Learning Environments' (ILE) as "the complete physical, social and pedagogical context in which learning is intended to occur". What are the implications of the implementation of ILE for your school?

Through the use of NVivo qualitative data analysis software, data was initially stored and organised. Analysis was undertaken to permit identification, analysis and description of discourses within the data (Sharp & Richardson, 2001). Discourses were identified within the data and linked with the researchers' engagement with leadership literature. Importing the themed data into Word files enabled the researchers to physically manipulate the data to look closely for nuances associated with the discourses generated from the leadership literature. Comments drawn from the survey data were selected on the basis that they best describe the leadership discourses that are focus of this paper.

Discourses are frameworks of meaning that cohere the social world and serve to construct it (Alldred & Burman, 2005). Discourse analysis provides a lens for us to interpret how the construction and mobilisation of discourse enables people to give themselves and others roles and identities (Morgan, 1996). Luke (1995) points out, one of the main tasks of discourse analysis is to "disarticulate" what appear to be everyday texts as a way of "disrupting common sense" about the naturalness or inevitability of identities, values and concepts (p. 20). Schools are constituted through discourses and discursive relations (Luke, 1995). To reveal the workings of power embedded in these discourses requires close analysis.

Analysis ... often involves looking for the themes or categories that underlie the surface linguistic disorder of the 'data'. [On an everyday level this is a] matter of learning, or choosing, to 'read' educational events and situations as texts. (MacLure, 2003, p. 8)

Through discourse analysis, links are examined between ILE implementation and leadership within the NZ education context. A range of data samples are presented to illustrate discourses of pedagogical leadership, instructional leadership and learning leadership. The ensuing analysis indicates an overwhelming proclivity in the data towards principals conceptualising leading ILE implementation as requiring learning leadership. In the proceeding sections, samples of leader data are used demonstrate pedagogical and instructional leadership discourses.

Pedagogical leadership

The pedagogical leadership explicitly addresses the development of capital. Described below is a capacity building approach that uses a dialogical professional learning approach to develop "social and decision making" capital.

We started with staff – creating first the culture where adult learning could flourish – then we worked towards developing self-learning teams – supporting staff members to develop and use their social capital and decision making capital to implement changes to how they engage in their own learning and develop their practice. These changes included different use of space (we are whānau grouped – years 2 - 6 working in one space as a team). The teachers collaboratively plan together and promote learning opportunities for the students. We are now seeing some of the same principles being applied with students, e.g., the development of social capital and decision making capital.

While spatial politics are a consideration (Smardon, Charteris & Nelson, 2016), the principals' survey comments highlight their need for focused professional learning processes to afford teachers the time needed to grapple with potential changes in their contexts.

The shift to teaching in an innovative learning space takes building an effective team and a new approach. The time to build capacity and organisation within the existing school calendar is really difficult.

A lack of space in our school and our teachers have not had a full grasp of the concept.

Much of this professional learning comprises a re-engagement with how children learn and how they are positioned as learners. There are times when the principals as both ‘learner’ and ‘leader’ indicated a need to target external expertise to progress their ILE change agenda and build capital.

We are currently questioning our old beliefs on how children learn and we are in the process of changing the way we teach, but we really need outside help in this process in the form of experts and facilitators, which are very expensive.

Productive partnerships between leaders in schools and external expertise has been a pattern identified across many highly effective interventions (Robinson, Hohepa & Lloyd, 2009) and principals’ responses extend the value of external expertise to the challenge of ILE innovation. Where the focus of pedagogical leadership is on capacity building, instructional leadership addresses processes of instruction.

Instructional leadership

Instructional leadership is in evidence where linkages are made between performance and processes of teaching and learning – planning, implementation, and evaluation of instruction. Principals linked these processes with accountability mechanisms. For instance, one principal observed that,

ILE have led to a significant shift in teacher performance and has significantly improved learner engagement and achievement.

The following principal responses indicate instructional leadership as a focus on process. There is an overlap between neoliberalism and learner empowerment (Czerniawski, 2012) that come together in the notion of agency, an individualistic conception, leveraging the child as a self-managing agent, surveilling themselves.

Positively, the outcomes for each learner becomes the responsibility of all involved with the child, teachers are more focussed on individual needs and seeking student voice and accountability for their learning.

This is an exciting opportunity to teach to the needs of the individual.

This principal instructional leadership discourse focused on student individualism suggests a focus on empowerment that serves neoliberal goals (responsibility and accountability). There are neoliberal overtones in the New Zealand Curriculum aspiration to promote ‘effective pedagogy’ that fosters the mechanisms of learning (Teaching as Inquiry) to strengthen student capacity to move into the workforce as confident, connected, actively involved, lifelong learners (Ministry of Education, 2007). The notion of learning leadership is a shift away from a primary focus on individualism.

Learning leadership

Learning leadership discourse is premised on relationality and an emphasis on enhancing student, teacher and leader learning. It reflects an ethos of equity and social justice. In their responses to the survey question, the majority of principals expressed learning leadership discourse in relation to ILE implementation. In the comment below, a principal noted that a holistic approach to student growth associated with beginning an ILE journey has sparked enthusiasm across the school community.

A holistic approach to learning and the students' participation, anticipation and growth in learning. A motivated staff, learners and school-wide excitement.

The “excitement” reported by this principal highlights the importance of learning leadership where motivation is evident at all levels of the school in the pursuit of success (Bowman, 2014). There was a strong sense from the principals that pedagogical deliberation was important to consider first and foremost, before making physical changes to the environment. ILE policy documents (Ministry of Education, 2015d) also provided an opening for schools to make their own philosophical moves around what they value.

Making sure that any changes are supported by strong pedagogy first – we don't want the cart in front of the horse.

Talking with colleagues within my region and wider, the initial part of conversations is always about the physical layout of this concept. For me, pedagogy has to be the foundation and learning at the core if ILE in the 21st century is going to work. That means that an enormous shift in thinking of what I did yesterday, last year and even 12 years ago when I began my teaching career. I need to be deliberate and reflective ... My practice and speed of implementing ILE within my class and school needs to be responsive to where we are at as a whole.

Relational trust is connected with the teacher pedagogical collaboration – a concrete pedagogical move associated with ILE. It was a common principal observation that teachers need to hold philosophically compatible pedagogy to work in alignment in ILE.

Teachers need to have a compatible philosophy about discipline, how to educate children and they must like each other.

Enabling collaboration to happen and for teachers to work more closely together to learn and share.

The potential to develop positive collegial relationships (founded on trust) through a shift to ILE featured positively in the principals' comments.

We have six classrooms working as an ILE. So far data has not shown any better results than single class. Teachers love working as a collective though.

It has embedded a much greater collaborative culture in the school.

Strongly connected teachers. Higher levels of collaboration. Deeper professional conversations.

We believe in ILE where there is great innovative learning practice. We are very happy with the learning and collaboration that is occurring.

The principals articulated mutual dependencies (Bryk & Schneider, 2002) and the importance of group norms around risk-taking, and change (Cranston, 2011).

It gives staff more choice. It facilitates collaboration and sharing, it allows for authentic peer feedback and feed forward.

Further development of co-operative planning and practice, development of ILE structures/ systems/protocols, resourcing ILE in a more flexible way than in the past, developing staff protocols and procedures around working together in an ILE.

I think we are now in a position to move forward together to create a new way of working.

There was an element of criticality demonstrated by the big picture emphasis on learning leadership. All three of the following comments demonstrate a big picture view of political initiatives and an importance of safeguarding learning cultures.

We are cautiously exploring the pedagogy around this concept while protecting the foundations of our school culture. We are not prepared to leap into a relatively unknown trend without having some definite indicators that it improves student achievement.... We are not going to be knocking out walls anytime soon!

ILE allow for flexibility in pedagogy and approaches to learning. This licence has always been there but now it aligns with government policy – could be a good thing or could, like in the student voice field, contribute to surface compliance and reductive approaches.

Often I think that our government's decision is guided by the low cost of these spaces to build rather than the impact on learning. We are a very poor area and mostly Māori ... In ... ILE spaces I see the [teacher/student] relationship becomes secondary. I see the lost children and the disengaged. I have not been able to locate any research that shows that these spaces have resulted in increases in achievement.... We need to ready our students for the future but there are other things we could be doing to get "bang for our buck" than building cheap learning spaces.

The comment above highlights the importance of foregrounding ako and 'āta' so that relationships within the school and beyond are considered in any ILE proposal. Principals evoked a critique of the perceived change agenda, articulating discernment in how they embraced shifting practices associated with ILE.

Time to work through the thinking and organisation that needs to be developed and applied in order to get everyone on the same page to make this happen. Not changing everything that we do but improving what we do to make things work better for students, teachers and parents.

Comments about a change 'mindset' were framed as an approach to enhance student learning. Although no principal explicitly used the term 'growth mindset,' many commented on their role in forging a change of mindset or thinking in staff and their role in communicating and leading change with stake holders, modelling a change mindset as a lead learner.

ILE is first and foremost a change in thinking, or mindset. My role as principal has been to broaden the view of the teachers and also the parent community. I also need to support the teachers in moving their practice towards a more student-led learning environment. It is also my responsibility to keep the [Board of Trustees] informed about the thinking and practice associated with ILE.

The change of mindset is the biggest factor to successful transition to ILE. Sharing best practice, knowing when to team teach and teach independently, how to use new flexible spaces, modelling good learning dispositions ... these are the practices that challenge us all at the moment. Also having some input into what the ILE looks like is crucial so [that] teachers are able to reflect and learn – as opposed to have a model placed on them.

Importance was placed by principals on leading pedagogical change, despite issues with physical resourcing. While for some the materiality of physical spaces was considered a difficult barrier, others viewed property issues as minor impediments to pedagogical change and innovation.

A change of thinking amongst colleagues, physical barriers of isolated classrooms.

While the environment has impact on the quality of teaching and to some extent impacts on the structure of the learning, it is not the key driver of pedagogy. Teacher knowledge and beliefs have more impact. I have seen some dreadful teaching and learning in the new ILE and some inspired teaching and learning in the old-fashioned classrooms.... Our school is a very traditional block where the heating radiators make opening up spaces difficult. However this has not stopped us moving toward changes in the way we deliver curriculum. But we look at research and change impacting on student achievement rather than grabbing the latest fashionable innovation.

A reticence on the part of principals to jump quickly into the political milieu of fads and fiscal agendas is apparent here. A discourse associated with learning leadership, of devolved school management, post Tomorrow's Schools (Department of Education, 1988) phenomena, is apparent in the principals' use of the term "our school culture". The juxtaposition of these discourses suggest a potential clash between the autonomy of self-managing schools which respond to their community needs and character and a centrally promoted vision for 21st century education. This theme is addressed in the following discussion of findings.

Discussion

Twenty-seven years after NZ schools became self-managing, there are clear tensions between contemporary centralised MOE policy levers and their implementation in self-managing schools, raising key challenges for leaders and leadership. Although there has been a powerful drive to adopt ILE in NZ, as outlined by the MOE (2015a) strategic plan, mandating an initiative does not guarantee operationalisation. Findings of this study suggest that there is a clear learning leadership focus among school principals. Leader responses to the ILE policy have been nuanced and considered, filtered through the philosophies of their schools and invoking variously confusion, suspicion and excitement. These contextualised interpretations suggest that in the deeply embedded self-managing climate of New Zealand's schools, principals reserve the right to interpret and act on policy imperatives in diverse ways. The data highlights how school leaders are considering the change potential suggested by the ILE policy and are interpreting it through their current professional learning and development initiatives.

Learning leadership, the dominant discourse collected in the survey data, is central to the change implementation taking place. In the context of ILE, learning leadership involves "creating visibility" and dissolving boundaries between classrooms, schools and communities (OECD, 2015a, p. 26). By making the physical changes to school environments as routine maintenance and scheduled changes, it appears that there is a sense that these changes will impact pedagogically rather than the other way around. However, as alluded to by many of the principals above, the philosophy and beliefs held by teachers about learners, about learning and how learning happens are the most significant issue. Principals consequently view ILE as an opportunity to re-visit fundamentals about how children learn and how learning can best be supported in ways that take advantage of emerging technologies and discourses.

Findings in our study highlight the necessity for significant learning leadership on the part of principals to gauge the needs of the staff, students, and communities in the spirit of *ako* and *āta*. This may well influence the pace of change. The findings of this study highlight a need for teacher professional learning and development (PLD) to be broadened. This would enable any difference in perceptions between the leader and staff to be bridged and learning leadership to be supported and strengthened within and across schools. A significant issue is raised around the support for both principal and teacher PLD in scoping what is involved in learning leadership in ILE contexts. If the changes are to be as dramatic as the OECD (2015a) literature

recommends, well-designed PLD could enable educators to reimagine the elements of the pedagogical core of schooling in their contexts and possibilise far reaching learning ecosystems.

Leading learning involves building pedagogic capacity through brokering the construction and reconstruction of physical spaces. Merely changing physical spaces in schools does not necessarily equate with pedagogical change, despite architectural designs that signal spatial intentionality for teacher collaboration. Findings in this study suggest a strong push back by principals on a focus of remodelling and refurbishing classrooms as a starting point, without engaging in concomitant teacher professional learning and development. Guskey (2002) argues that changes in teachers' attitudes occur primarily after they gain evidence of improvements in student learning, noting that "change is primarily an experientially based learning process for teachers" (p. 384). This line of argument suggests that teacher PLD needs to be paired with school remodelling so that the design of material spaces follows pedagogical principles that resonate for teachers, principals and students. Nevertheless, in many instances the physical transformation occurs before the pedagogical due to administrative governance levers, related to the requirement for schools to generate five year property plans for related funding dispersal. This leverages physical change in schools in a way that can be out of step with pedagogical development.

Without constructive alignment between pedagogical considerations and the affordance of the remodelled environment, innovative classroom designs could fail to meet their pedagogic potential. Wells (2015) challenges educators to consider whether ILE are examples of idealised curricula or merely disruptive innovations. He highlights that changes, particularly in secondary schools, "signal a philosophical divergence to previous models of schooling and will not only significantly influence the design of the learning environment but also signal a need to question the relevance of pedagogy and curriculum" (p. 73). The findings above suggest that in initial responses to ILE, principals and teachers view spatial re-design as operating in dynamic tension with pedagogical development.

Over the last decade, 21st century learning discourse with its taken-for-granted emphasis on change has become a powerful influence in NZ schools. Evident in the principal data is a corresponding 'change mindset'. A 'change mindset' is where teachers and leaders work responsively with the expectation that they take up 'homo economicus' (Tan, 2014) stance of meeting the change demand of 21st century schooling discourse. This change orientation is a key driver in the argument to reshape pedagogical practice through ILE.

Limitations

The survey captured only a snapshot comment from the principals. It does not allow for a contextualising of these comments in the school milieu or allow for elaboration or clarification. In this way, the instrument is limited. However, the data presented does provide an opportunity to consider the discourses in play around leader, teacher and learner agency, the affordances and challenges associated with collaboration and relational trust in ILE, and the impetus and pressure for principals to lead change to reconceptualise schooling. The present study raises questions for further research to explore stakeholder perceptions of changes associated with ILE.

- Who is driving the change – where does it come from and what is the agenda behind it?
- How are schools that resist the mandate for ILE driving their own innovations?
- How is the push towards ILE at an official level modelling approaches to teacher PLD that policy makers (for instance the NZ MOE) want to see as a pedagogical model in classrooms?
- To what extent and in what ways are ILE in Aotearoa/NZ developed in partnership with iwi so that the spirit of ako (indigenous learning beliefs and practices) and 'āta' influence their development?

Conclusion

It must be noted that the discourse of 21st century learning is not new for teachers and leaders who have been developing pedagogy compatible with the ILE direction over the last decade. Yet the speed of ongoing changes

in digital and political landscapes requires a high degree of educator adaptability and a critical engagement with the discursive intersection between education policy and economic rationalism. It is our observation that change can be an imposition – something ‘done to’ educators and, after the ‘dust and shouting’ has died down, educators seem to get on with making policy initiatives work in their contexts. This is evidenced in the wide scale schooling administration reform of Tomorrow’s Schools (Department of Education, 1988) and contemporarily the introduction of the NZ National Standards (Ministry of Education, 2010) and Investing in Educational Success.

ILE are still being conceptualised in the NZ context and therefore their implementation is under mediation; principals are central to how ILE are conceptualised and implemented. The ‘Tomorrow’s Schools’ ethos of agentic professional decision-making mediates principals’ response to the ILE policy push. Agency is evident in the school leaders’ measured and critical perspectives where they filter official policy in light of their differing school philosophies. ILE reflect a drive to reshape space and promise rich pedagogic potential. Yet, they provoke a challenge for principals in mediating and brokering innovation. Data presented in this article suggest principals position themselves as learning leaders to meet this contemporary challenge, enacting commitment to relationality and an emphasis on enhancing student, teacher and leader learning as key to their decision-making.

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Authors

Jennifer Charteris, PhD is Senior Lecturer of Pedagogy and has been working in the University of New England School of Education since 2013. Her particular research trajectory is in the area of politics in education. Politics can be understood as power relations; the origin and distribution of power. Jennifer conducts research in the area of the politics of teacher and student learning, identity and subject formation. Critical and poststructural theories inform much of her work. She researches in collaboration with educational leaders (in schools), teachers and students. She is currently conducting a trans-national study with colleagues in Aotearoa/NZ, and Australia. Email: jcharte5@une.edu.au

Dianne Smardon is based in Hamilton, New Zealand. Dianne undertakes contract work for the University of New England as a teacher educator and researcher on the Nauru Teacher Education Project at the University of New England. Between 1998 and 2013, she led Assessment and Leadership professional development projects for teachers and school leaders in New Zealand. She has undertaken consultancy work with school leaders and teachers in Hong Kong. In researching teacher education in New Zealand and the Pacific, she has contributed to a range of research outputs. She has published research articles on school leadership and systemic improvement though collaborative peer coaching practices. Email: diannesmardon@gmail.com

Emily Nelson, PhD lectures at the Eastern Institute of Technology, New Zealand. She leads an innovative practice-based teacher education degree program. Emily brings experience as a primary and middle level teacher and professional development facilitator to her research work. She is motivated by student voice as socially just action. Her doctorate, completed in 2014, explored how power conditions possibilities for student and teacher action in classroom-based student voice initiatives. Emily has a range of collaborative international research projects underway. Email: ENelson@eit.ac.nz