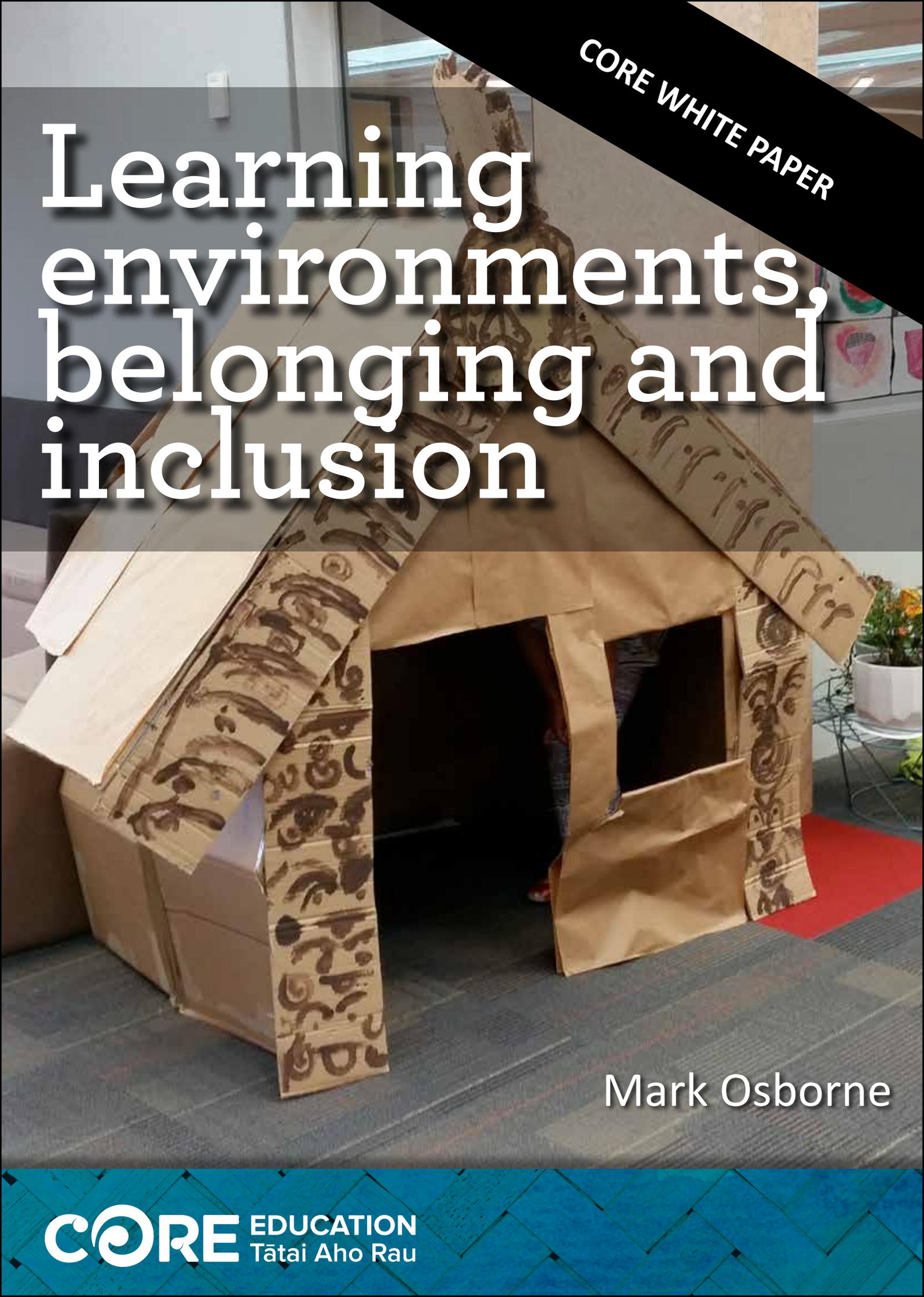


CORE WHITE PAPER

Learning environments, belonging and inclusion



Mark Osborne

About this white paper

This CORE Education white paper series offers ‘pointers to promising practice’ drawn from research into the most effective way to align pedagogy and learning environments.

About the authors:

Mark Osborne

Senior Advisor Future-focused Education
CORE Education

Mark is a Senior Advisor in Future-Focused Education, particularly in the areas of innovative learning environments, leadership, and modern learning practice. He helps organisations design and build great spaces to learn while helping educators develop the capacity to make the most of those spaces. Mark’s personal mission is to turn all schools into awesomeness incubators, and he is currently completing his PhD on change leadership in innovative learning environments at the University of Melbourne.

Mark was part of the foundation leadership team at one of New Zealand’s leading future-focused schools: Albany Senior High School. Mark also established the country’s first open source high school, and an innovative bring-your-own-device (BYOD) programme in 2009. Mark has helped dozens of organisations launch their BYOD programmes, helping schools and centres to break free of industrial age education.

CORE Education’s White papers

CORE Education is a New Zealand based not-for-profit organisation that has been providing world-class professional learning and development, research, and thought leadership for over ten years. CORE has a strong desire to transform education, and we believe that new technologies are an exciting way to engage learners across all education and training sectors. The CORE Education research reports are intended to provide helpful information for improving education in New Zealand and the world. They provide insights, promote discussion, and inform school leaders and teachers about educational themes and trends.

Introduction

A learner's socio-emotional wellbeing is critical to educational success (the OECD refer to emotions as 'the gatekeepers of learning' – Dumont, H., Istance, D., & Benavides, F., 2012), and schools, kura and centres that cater for the affective (and relational) needs of learners are most likely to provide the best outcomes for those learners. The Education Review Office outlined the importance of student wellbeing in their 2015 national report on the topic, and identified a direct between belonging and wellbeing:

“Although there is not a single measure for student wellbeing, the factors that contribute are interrelated and interdependent. For example, a student's sense of achievement and success is increased by a sense of feeling safe and secure at school and, in turn, affects their resilience.” (ERO)



This CORE Education white paper will explore some of the ways in which a well-designed and thoughtfully implemented physical learning environment can foster a sense of belonging in learners, which in turn can contribute to their wellbeing and ultimately their success in education.

Researchers as far back as Abraham Maslow (1943) have identified physical safety and a sense of belonging as important precursors to learning. Primary schools in the 'industrial' style often provided a sense of belonging that centred around a single teacher and a single physical space: "I'm in Room 20 with Mrs Barton." However, as organisations provide a wider variety of spaces (and collaborative teaching teams) to meet learner needs, it's important that schools, kura and centres implement systemic structures to ensure a sense of belonging is developed in every learner. Consider the learner in a collaborative learning environment who might have three teachers to support them in their learning (all of whom bring different strengths): that learner may feel that they have a good connection with all of those teachers, but not a primary connection with any single one of them. So, how do organisations use both physical and socio-

cultural learning environments to ensure all learners have the advantages of an innovative learning environment¹ without losing a sense of belonging?

Inclusive spaces

An inclusive education is one whereby “all students are welcome and are able to take part in all aspects of school life” (New Zealand Ministry of Education, 2015). Schools, centres, and kura that are committed to inclusion critically evaluate all aspects of their physical, social and cultural environments to ensure any potential barriers to participation are removed. Seemingly innocuous decisions such as, which furniture or technology is purchased, or how learners are grouped together with educators come back to inclusion and the desire to remove barriers to learning. Questions we might ask about how inclusive our learning spaces are include:

- › Does the furniture within an environment allow easy access for people using wheelchairs, walkers, strollers or crutches — including learners, parents, community members and whanau?
- › Does the amount and density of furniture add to, or decrease the anxiety levels of students who don't like feeling penned in?
- › Are the noise levels in an environment appropriate for all learners? Can learners hear what they need to and find quiet spaces when they need to?
- › Are technologies and approaches that support learners who have impaired vision being used well in the environment?

Effective learning space design takes into consideration all learner preferences for things like learning on their own or with others, collaboration or quiet reflection, indoors or outdoors, standing or sitting. Environments that support a variety of these learning modalities afford educators the opportunity to be more inclusive in their practice. Practically this is often seen in: the choice and arrangement of furniture that can be collaborative or individual; rooms that have good acoustic separation to support quiet or noisy activities; or the use of elements such as sliding glass doors that can be used to create more enclosed or more open spaces.

Attachment figures

Attachment theory is an area of psychology that proposes that children make the most progress when they have a strong attachment figure in their lives. Studies have demonstrated a range of positive benefits including “higher grades and standardized test scores compared to insecure attachment... greater emotional regulation, social competence, and willingness to take on challenges” (Bergin & Bergin, 2009). This research outlines the importance of developing strong, positive relationships focused on learning: if children haven't developed strong attachment figures in life, they will probably not succeed as well in education as their peers who have. Researchers have found that it is particularly important for these more vulnerable learners to have a primary attachment figure in their early childhood centre, school or kura (Mayseless & Granot, 2001).

Some schools, kura and centres link their practice to research by providing a primary attachment figure in the form of a ‘buddy’ teacher or educator for each learner (this buddy teacher often also forms a single point of contact to strengthen partnerships with home). While the buddy teacher doesn't prevent the development of strong relationships between learners and the

¹ The term ‘innovative learning environment’ is commonly used to describe spaces that are more open, flexible and collaborative than traditional classrooms. The New Zealand Ministry of Education now uses this term (instead of ‘modern learning environment’) in part because it has greater currency internationally (New Zealand Ministry of Education, 2015). The word ‘innovative’ can be defined as ‘having relative advantage over existing practices’. (Borrego & Henderson, 2014)

other adults in the learning environment, they are a strategy to ensure children who are most vulnerable have wrap-around support provided to them. Tracking, accountability and responsibility for reporting each learner's progress can also rest with both the buddy teacher and the wider team. The variety of educators in a learning hub or studio also increases the likelihood that each learner will find a teacher with whom they can connect- either through common interests such as sport or music, or through ethnicity or cultural connections, or even just because of their gender or personality.

Some Primary schools using innovative learning environments use the concepts of whanau, hapu and iwi time to describe learners working with a single teacher, several teachers or a larger group. Approaches such as composite (or multi-level) classes or 'looping' (where a teacher stays with learners as they progress through year levels) also offer learners the opportunity to develop strong attachment to teachers that persist over two or more years.

Building design

A number of the physical elements of the built environment can contribute to a sense of belonging for learners (or at least the removal of a sense of alienation). The use of internal glass walls and doors increases visual connectedness between learners, their peers and teachers so they know they are never far away from their teachers and peers. Spaces that offer good sightlines while eliminating blindspots, unactivated edges and unsupervised spaces can decrease bullying and increase pro-social behaviour. Good building design supports passive supervision of learners, but it also ensures that learners have adequate spaces to ensure they don't feel cramped or threatened (Day & Midbjer, 2007).

Many organisations also allocate on-site space to family and whanau in order to create somewhere for them to relax, feel welcome and have a cup of tea. Learners who feel anxious about the transition to a new school, centre or kura, or who simply feel anxious about parents leaving them may feel less anxious if they know that their parents or whanau are still present onsite. In addition to the provision of these spaces, organisations should work closely with parents and whanau to ensure they feel welcomed and part of the community.

Culture and identity

Acknowledging, welcoming and celebrating culture is also crucial to the development of a sense of belonging for all learners. We know that there is a strong link between wellbeing and achievement, and that students' well-being is strongly influenced by "a clear sense of identity, and access and exposure to their own language and culture" (New Zealand Ministry of Education, 2013). Beyond mere 'exposure' to one's own language and culture, learners do better in education when:

- i) their identity, language and culture are valued as an essential part of who they are; and
- ii) when what and how they learn reflects and positively reinforces this identity.

Effective practice in this area includes:

- › Making reference throughout the school, centre or kura site to Māori history, worldview and mythology: signage, artefacts and curricula that strengthen and honour connections to maunga, awa, wahi tapu, constellations, culture and history.
- › Moving beyond surface displays of Māori culture (like taniko borders on wall displays) to deep engagement with biculturalism and the Treaty of Waitangi (organisational structures and arrangements drawn from Te Āo Māori including key concepts that underpin curriculum and

culture; architectural forms embedded into building and landscape design; planting plans that promote native plants of particular importance to Māori etc.

- › Developing strong collaborative partnerships between schools, centres or kura and stakeholders, focusing on ways to honour, promote and build on identity, language and culture. This collaboration is essential to ensuring Māori and Pasifika learners enjoy and achieve education success as themselves.

Extensive research shows that similar approaches contribute to the success of Pasifika learners (indeed all learners). In particular “the right to be included appropriately in all processes of education” promotes learner success (Bishop, 2003; Jones, 1991 et. al. cited in Bruce Ferguson, P., Gorinski, R., Wendt Samu, T., & Mara, D. (2008). Inclusion is reliant upon schools, teachers, and other students acknowledging the right of Pasifika learners to “be themselves” and to “see themselves and their culture reflected” not only in the physical environment but also in the curriculum (Bruce Ferguson, P., Gorinski, R. et. al., 2008).

Furniture, fixtures and equipment

Historically one way that schools in particular have offered a sense of belonging to learners was to provide learners with a physical home within the classroom (often their own desk or chair). As many schools move towards providing more variety of furniture (standing tables, reciprocal teaching stations, conferencing desks, ottomans and soft furnishings etc.) they are moving away from allocating a learner a single chair that they should occupy for most of the day. This decrease in the practice of a learner ‘owning’ a single piece of furniture should probably be met with a corresponding increase in a sense of ownership of, and responsibility for, the whole learning environment.

While this approach of moving away from students remaining at a single piece of furniture throughout the day reflects the growing body of research into the importance of active learning and movement in learning, there is still a need to offer learners somewhere to put their belongings and equipment. Gifford (2002) refers to the importance of a degree of ‘privacy and ownership’ to students’ sense of belonging. Again, the traditional way that many primary schools have offered ‘privacy and ownership’ has been through the allocation of a set desk when learners can put personal items without fear of them being tampered with or lost. As the use of individual desks declines, many schools, centres and kura are offering cubbyholes, tote trays and other storage tools to ensure students still have ‘privacy and ownership’ within a space.

Too much furniture can also have a negative impact on behaviour within a learning environment. Specifically, high levels of density (too much furniture and/or too many people in a space) has been linked to increased aggression amongst students (Gifford 2002). In response to this, many architects now include circulation or ‘traffic’ space within the learning environment, effectively taking what has traditionally been ‘corridor’ and including it in ‘the classroom’. This has the effect of increasing the effective square meterage of a learning environment by around 30%, thereby decreasing the effective density of a space.

Walls and display

While many teachers take this idea for granted, it’s important to reiterate the impact that displays of student learning (and in particular student artwork) can have on those in a learning environment. Displays of learning develop a deeper sense of identity and ownership, but also model the learning process visibly for all to see. When walls and display areas begin showcasing and modelling thinking

and approaches to learning, the environment becomes what Loris Malaguzzi refers to as the ‘third teacher’ of children (after adults and other children).

One of the challenges in a collaborative learning environment is that no single teacher ‘owns’ the display space, so without deliberate planning and coordination, teachers may feel they are encroaching on others’ wall space. If all teachers feel this way and it remains unsaid, it’s possible that display spaces aren’t as well used as possible. A further consideration is that every learner should have equal opportunity to see their artefacts of learning celebrated through the environment. This again requires a level of coordination that is planned rather than serendipitous.

Agency and belonging

Alongside physical learning environments, the ways in which learning occurs within a space can also increase a sense of ownership and belonging. Having ‘agency’ over your learning (having ‘the power to act’, or to be involved in decisions related to your own learning) also increases a learner’s sense of belonging. Researchers have concluded agency and belonging go hand-in-hand: “when students believe that they are valued for their perspectives and respected, they begin to develop a sense of ownership and attachment to the organization in which they are involved” (Mitra 2009). Similarly, when students are “able to talk about [their] experiences of learning in school and [have their] account taken seriously [it] offers students . . . a stronger sense of membership . . . a stronger sense of respect and self-worth . . . a stronger sense of self-as-learner . . . [and] a stronger sense of agency” (Rudduck, Demetriou, & Pedder 2003). The clear message these researchers have identified is that belonging is as much about teaching and learning as it is about physical learning environments.

Organisational structures

Schools, centres and kura can also support social cohesion and a sense of belonging by examining their wider organisational structures. In 1992 social scientist Robin Dunbar proposed the idea that when a group goes over a certain size, social cohesion begins to fall, and anti-social behaviour begins to rise. This maximum number (known as ‘Dunbar’s number’) is often proposed at around 150 people, and research suggests that above this number, our personal connection with each group member decreases. It also goes some way to explaining why most cultures throughout the world don’t exceed this number for their villages or extended families.

At a practical level, this research encourages educational institutions to work in units of organisation smaller than about five class equivalents, expressed in the form of a ‘learning community’, ‘studio’ or ‘whānau group’. Indeed Lee & Smith (1995) found that primary and secondary schools that implemented practices which included developing smaller ‘schools within schools’ produced significantly higher achievement gains, and those achievement gains were more equitably distributed.

Conclusion

As schools, centres and kura respond to changing times by re-examining their physical, social and pedagogical architecture, it is important that the provision of a sense of belong is paramount. In fact, the fostering of a sense of safety and belonging is one of the vital tools that organisations have available to them if they are to address educational inequity.

Reflective questions:

- › How are all learners provided with a central attachment figure in your organisation?
- › How inclusive are your current learning environments?
- › How have you provided deep engagement with learners’ language, culture and identity?

References

- Bergin, C., & Bergin, D. (2009). Attachment in the Classroom. *Educational Psychology Review*. <http://doi.org/10.1007/s10648-009-9104-0>
- Borrego, M., & Henderson, C. (2014). Increasing the Use of Evidence-Based Teaching in STEM Higher Education: A Comparison of Eight Change Strategies. *Journal of Engineering Education*, 103(2), 220–252. <http://doi.org/10.1002/jee.20040>
- Bruce Ferguson, P., Gorinski, R., Wendt Samu, T., & Mara, D. (2008). Literature review on the experiences of Pasifika learners in the classroom Report to the Ministry of Education New Zealand Council for Educational Research.
- Day, C., & Midbjer, A. (2007). *Environment and children*. Routledge.
- Dumont, H., Istance, D., & Benavides, F. (2012). The Nature of Learning — A Practitioner's Guide. <http://doi.org/10.1177/105256298701100211>
- Dunbar, R. I. M. (1992). Neocortex size as a constraint on group size in primates. *Journal of Human Evolution*. [http://doi.org/10.1016/0047-2484\(92\)90081-J](http://doi.org/10.1016/0047-2484(92)90081-J)
- Gifford, R. (2002). Environmental psychology: Principles and practice. *Geoarchaeology An International Journal*, 17(5), 484–486. <http://doi.org/10.1002/gea.10025>
- Lee, V. E., & Smith, J. B. (1995). Effects of High School Restructuring and Size on Early Gains in Achievement and Engagement. *Sociology of Education*, 68(4), 241–270. <http://doi.org/10.2307/2112741>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370.
- Maysseless, O., & Granot, D. (2001). Attachment security and adjustment to school in middle childhood. *International Journal of Behavioral Development*. <http://doi.org/10.1080/01650250042000366>
- Mitra, D.L. 2009. "Student Voice and Student Roles in Education Policy Reform." In D. Plank, G. Sykes, & B. Schneider, eds. *AERA Handbook on Education Policy Research*. London, UK: Routledge.
- New Zealand Ministry of Education. (2013). *Ka Hikitia: Accelerating Success 2013-2017*.
- New Zealand Ministry of Education. (2015a). About inclusive education | Inclusive Education. Retrieved December 14, 2015, from <http://inclusive.tki.org.nz/about-inclusive-education/>
- New Zealand Ministry of Education. (2015b). *Innovative Learning Environments*. Retrieved from <http://mle.education.govt.nz/>
- Rudduck, J., Demetriou, H., & Pedder, D. 2003. "Student Perspectives and Teacher Practices: The Transformative Potential." *McGill Journal of Education*. Vol. 38, No. 2.

