



MODERN LEARNING ENVIRONMENTS

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Abstract

Many of the modern learning environments being built today promote and support a range of pedagogies including delivering, applying, creating, communicating and decision-making. They are often centred around a student 'home base' where a lot of the teaching and learning occurs, and these bases provide access to a variety of other learning spaces. Modern learning environments support strengths-based teaching and can offer students and teachers flexibility, openness and access to resources. Providing teachers with an open, flexible learning environment where inquiries are shared, interventions devised collaboratively and reflections based on both self and peer observations, can lead to the development of a robust, continuously improving community of practice.

CORE Education's White Papers

CORE Education is a New Zealand based not-for-profit organization that has been providing world-class professional learning and development, research, and thought leadership for over ten years. At CORE we have 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 white papers are intended to provide insights, promote discussion, and inform school leaders and teachers about trending educational themes and trends.

Modern Learning Environments

Overview

What we know about learning has increased dramatically over the last 20 years. MRI scanning that allows us to see inside the brain as learning occurs, and landmark studies such as John Hattie's Visible Learning (Hattie, 2008) mean that we now have a much better idea of how learning occurs.

As a result of these developments and others, we know that quality learning is a combination of the following elements:

- Personalised learning: no two individuals learn in the same way, nor do they bring the same prior knowledge to a learning experience. The way we learn is as unique as our fingerprint.
- Socially constructed learning (Johnson, 1981): the collaboration, peer-tutoring and reciprocal teaching that occurs when students work together results in a deeper understanding of the material being covered.
- Differentiated learning (Bloom, 1974): the prior knowledge we all bring to a task means individuals require different levels of challenge, pace, content and context.
- Learning that is initiated by students themselves (Ramey & Ramey, 2004): typically when a student initiates a learning experience or exploration, they learn more.
- Learning that is connected to the physical world and authentic contexts: children learn through interaction with others and the physical world (Malone & Tranter, 2003). Learning about pond ecosystems is more powerful if students visit a pond in addition to learning about them in a classroom or textbook.

Most of New Zealand's school buildings were built in a time when direct instruction was considered the only pedagogy that resulted in effective learning. "Factory-style" learning (where all students learn the same things, at the same time, in lock-step fashion) has largely disappeared from our classes. However the actual classrooms largely remain as they were originally designed, and still retain the suggestion of factory-style learning.

Features of modern learning environments

Modern learning environments that align better with what we know about the brain and student learning can facilitate traditional pedagogies such as direct instruction if needed, but they typically offer students and teachers much more:

- Flexibility: the ability to combine two classes into one for team-teaching, split a class into small groups and spread them over a wider area or combine different classes studying complementary learning areas.
- Openness: modern learning environments traditionally have fewer walls, more glass and often use the idea of a learning common (or hub) which is a central teaching and learning

space that can be shared by several classes. They provide opportunities to observe and learn from the teaching of others and be observed in return. They also provide access to what students in other learning areas and level are learning, so that teaching and learning can be complemented and enhanced.

- Access to resources (including technology): typically a learning common is surrounded by breakout spaces allowing a range of different activities, such as reading, group work, project space, wet areas, reflection, and presenting. There is often a mixture of wireless and wired technology offering access as and when students need it, within the flow of their learning.

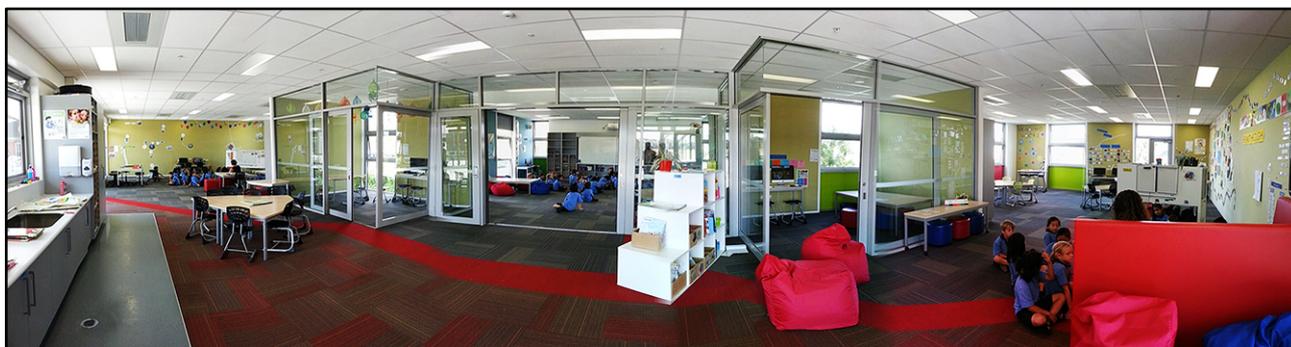
Learning environments to support student learning

Many of the modern learning environments being built today effectively promote and support a range of pedagogies including delivering, applying, creating, communicating and decision-making. Often they are centred around a student 'home base' where a lot of the teaching and learning occurs but these bases also allow access to other learning spaces. Not all classes will need all spaces all of the time, but students should have access to them should the need arise.

Modern learning environments support strengths-based teaching. For example, two classes collaborating on a science project that requires them to publish what they've learnt in the form of an educational poster will achieve much better results if both classes have access to one teacher who has considerable skill in graphic design and one teacher who has excellent knowledge of science and scientific inquiry.

Case study: Stonefields School, Auckland

Stonefields School is made up of a series of 'Learning Hubs' which are larger, shared classroom areas surrounded by breakout spaces that offer students a range of different learning activities: group work, digital production, project work, reflection spaces, reading spaces, etc. Typically three teachers share each hub, and the collaboration that takes place in them mean students have access to a range of teacher strengths, and classes can be reconfigured easily to meet learner needs.



Learning environments to support teacher learning

Open and flexible spaces also create more collaborative communities of practice for teachers. Having access to the teaching practice of your colleagues to model and to be modeled to, supports the development of effective teaching practice far more than teaching in an isolated, private space. This 'de-privatisation of practice' means that honest exploration of teacher strengths and weaknesses can take place in an open and supportive environment.

Beginning and provisionally-registered teachers have far more support around them in open learning spaces. Their progress can be monitored, supported and celebrated by their more experienced colleagues and ongoing low-level mentoring is easy to put in place because they have seasoned professionals to the left and the right of them.

Modern learning spaces can support teaching as inquiry better than single-cell classrooms. Working in an open, flexible learning environment where inquiries are shared, interventions devised collaboratively and reflections based on both self and peer observations, leads to a more robust, continuously improving community of practice.



Reflective Questions

- What is your school's vision for teaching and learning? Does everyone share this vision? How do you know? Which aspects of your school culture would you like to improve? How would you measure the improvement?
- What are the key pedagogies required by teachers in the 21st century? Are these the ones in use in your school most days? What systems and processes are in place to help teachers reflect on their own practice and learn from each other?
- If you were to build a new learning space that reflected your school's vision and commitment to learning, what would it look like? What would students need to have access to over the course of a day? What activities would they engage in over the course of a day? What technology would be required to support this?
- If curriculum, pedagogy and learning environments are helping to make learning more personalised, what other elements of the schooling ecosystem need to change? Who is a 'teacher' and who is a 'learner'?

References

Bloom, Benjamin S. "An introduction to mastery learning theory." *Schools, society and mastery learning* (1974): 3-14.

Functional Magnetic Resonance Imaging
(http://en.wikipedia.org/wiki/Functional_magnetic_resonance_imaging)

Hattie, John. *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge, 2008.

Johnson, David W., et al. "Effects of cooperative, competitive, and individualistic goal structures on achievement: A meta-analysis." *Psychological Bulletin; Psychological Bulletin* 89.1 (1981): 47.

Malone, Karen & Tranter, Paul. "Children's Environmental Learning and the Use, Design and Management of Schoolgrounds." *Children, Youth and Environments* 13(2), 2003. Retrieved March 2013 from <http://colorado.edu/journals/cye> March 2013.

Ramey, Craig T., & Ramey, Sharon L. "How Children Learn And How Parents Can Help". Retrieved from the web <http://www.cdl.org/resource-library/pdf/how-children-learn.pdf> , 2004