

2019 Sabbatical Report

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Term 3

Sabbatical Report: TOPIC

- To investigate modern teaching/pedagogy and physical aspects of innovative learning spaces.
- With reference to:
- A)How these can be adopted in a two teacher rural school
- B)How children with particular learning needs, such as high functioning autism, are catered for in ILS.

Acknowledgements:

- Teacher study awards MOE
- Hawera Christian School Board and staff
- Omata and Brunswick schools for permission to photograph.

Executive summary

- The sabbatical provided an opportunity to clarify thoughts around the design of our older school and reflect on how the building design could be modified to reflect current collaborative teaching styles without losing our rural family/whanau orientated character.

Background and rationale

- Hawera Christian School moved onto the current site at Tokaora in January 2013. The building had been derelict and the school community made improvements to bring the site to functionality.
- After 7 years on site and changes in ownership arrangements HCS is ready for an upgrade.
- We need to ensure that an upgrade provides for the best of modern teaching practice.
- We are a magnet school for students with autism spectrum disorders. We need to acknowledge what learning systems work best for these students.

Methodology

- Visits to schools: Specifically smaller semi-rural schools with older style buildings.
- Discussion with principals/teachers/students: We discussed school vision and how to retain our special character. We shared how design best enhances school life.
- Observations. I observed how students move in the buildings and how break out spaces were utilised
- Research: I found many online and professional industry publications with references to ILE. The autism society has a great deal of documented anecdotal evidence.

FINDINGS: Changes in Educational Thought.

The last decade or so has profoundly disrupted Western education. Many factors, including changes in society; globalisation; low-cost mobile devices; information storage; retrieval and storage networks; and, advances in our understanding of the way the human brain learns, have meant that long-established practices in education have come under increasing scrutiny.

One area that is currently under such scrutiny is the design of the buildings within which education takes place. One of the dominant metaphors in Western education through most of the 20th century was the idea of the industrial 'assembly line'.

Modern society needs thinkers and innovators.

It is no longer possible to predict exactly what knowledge people will need to know: it is changing all the time, and new knowledge is being created at ever-increasing speeds. (Bolstad et al., 2012).

Information is freely available like air or water. The purpose of education is no longer primarily about acquiring knowledge; that knowledge can be gained elsewhere. Increasingly education is about gaining skills, disciplines, capabilities and competencies as well as knowledge (Wagner, 2014).

Increasingly what the world cares about is not what you know but what you can do with what you know.

In an age where smartphone apps can solve any algebra problem you can point the camera at, and can translate paragraphs written in foreign languages in real time, simply getting the right answer is no longer enough (Wagner, 2014).

Buildings need to be responsive to the changes in Education.

Many educators are responding to these challenges despite the fact that around 70% of New Zealand's school buildings were built well before the emergence of these trends.

In fact the majority of New Zealand-Aotearoa's school building stock was constructed during the 1950s and 60s (New Zealand Ministry of Education, 2011). The move to Innovative Learning Environments (ILEs) being adopted by many schools across the country is in part a response to the challenges outlined above, but also an acknowledgement that for many learners the traditional assembly line system has not worked well at all.

Hawera Christian School has buildings from last century.
Do we need to respond to the changes in Education?

Physical Environment is important.

“The physical environment can directly impact on students learning for better or for worse”

Barrett and Zhang(2015)

“The differences in the physical characteristics of classrooms explain 16% of the variation in learning progress over a year”

“Where the physical environment gives teachers the tools they need to do the job better, student learning benefits.” Education Central.co.nz ILE Here's the evidence.

The Ministry of Education has adopted the planned policy of Modern Learning Environments (now Innovative Learning Environments) since 2010 as a response to the need for renovation of old building stock and in the Christchurch rebuild. The MOE estimates it has spent \$747.7million on 19 new ILE schools between 2013 and 2017.

Schools are still to decide the best use of space.

Opinion has been divided.

A 2015 select committee inquiry on effectiveness of ILE found positives and negatives.

What are ILE?

- “ILE refers to the complete physical, social and educational context in which learning occurs”, rather than just a type of classroom. MOE Head of education infrastructure Kim Shannon.*
- The idea is that flexible open –plan spaces are conducive to 21st century learning- much of it student lead, inquiry based and collaborative. *
- Teachers work in teams and students work with the teacher who best suits their needs in “hubs” that range from 50 to 300 students.(CHCH Haeata Community centre)*
- There is more technology available.
- Furniture is flexible and includes bean bags, standing desks and lily pads.
- Breakout spaces offer low stimulation zones.

*Rachel Heyler Donaldson “Learning on Beanbags”2018

Disadvantages of ILE

- Professional development input is needed to upskill staff.
- Students respond best to one strong relationship with a teacher. ILE have two or more teachers and aides in a room.
- Teacher aides are required to assist with students who struggle in a larger space with more people. (MOE engaging with Autism NZ)
- Noise. The autism society suggests students wear ear muffs, avoid noisy environments or undergo white noise desensitisation. Dane Dougan of the Autism society quotes that 50% of students expelled or home schooled have autism diagnosis. (Kathy Jones Stuff July 2018)
- Too much stimulation. Students with ADHD require breakout spaces for quiet work areas.
- Teachers must be able to team –teach.
- Fear that students will “fly below the radar”
- Unknown long-term effects of electronic devices on sleep, vision and brain development.
- Parental concerns over loss of handwriting skills and musculoskeletal development from use of bean bags and devices.

Advantages of ILE

- Mixed ability grouping.
- Students can find the place they work best and the people they work best with.
- Break out spaces mean students can be doing a variety of activities without interrupting others.
- Decrease in behavioural issues. Hampden St Primary school says poor behaviour dropped 78% in 2013 after ILE was introduced.
- Team teaching provides role modelling and support for Educators.
- Professional Development results in well trained staff.
- Attractive modern buildings.
- Well designed flexible space can be easily adapted for art, drama, music or closed for small group teaching sessions.

The key to an effective Innovative learning environment is FLEXIBILITY

IMPLICATIONS:

HCS is not in the financial position to support a new build.

How do we take the best points of the ILE and integrate this with our older buildings so that teachers can provide a quality modern education without losing the relationships that make us special?

Our current facilities offer little flexibility. Rooms are small and are designed for teacher directed learning. What would give us flexibility?

- Moveable walls
- Agile and varied furniture
- Sliding doors
- Varied room shapes
- Break out spaces- quiet zone, active zone, collaboration zone.

Factors to make a quality ILE

- Connection to the outdoors
- Good sight lines
- Natural light
- Transparency and openness
- Sense of belonging
- Celebration of learning on the walls
- Affirmation of students language, identity and culture
- Movement –i.e. standing tables. Increased Oxygen meant increased memory and recall (Sousa 2014)
- Flexible furniture to allow for a variety of learning styles.
- Small group/needs based teaching- increased achievement between 11-19% (Imms and Byers 2016)
- Good acoustics
- Heating and ventilation
- Quality teachers.
- At HCS we also provide for the spiritual dimension. A flexible space could be provided for quiet prayer, time with the Chaplain or “joyful noise”.

What examples of good practice are there for HCS?

- Glass doors for visibility, indoor- outdoor flow and flexible space.



- Closed in verandas for break out spaces.
- Use hallways to widen classrooms



- Variety of furniture styles.



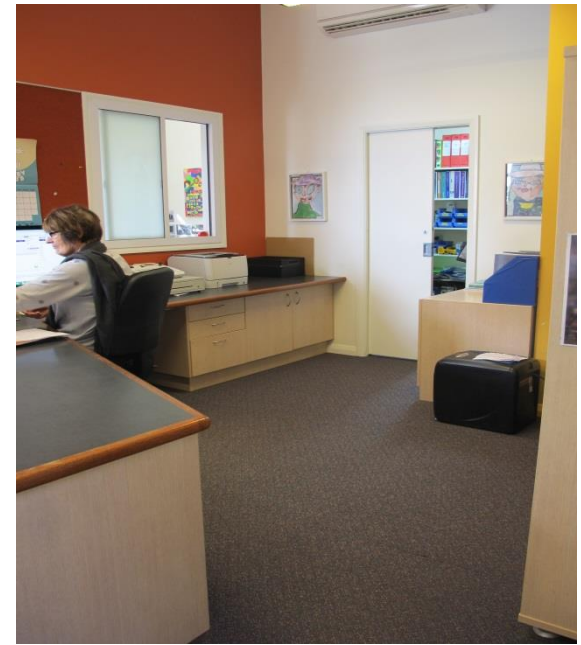




- Space saving storage



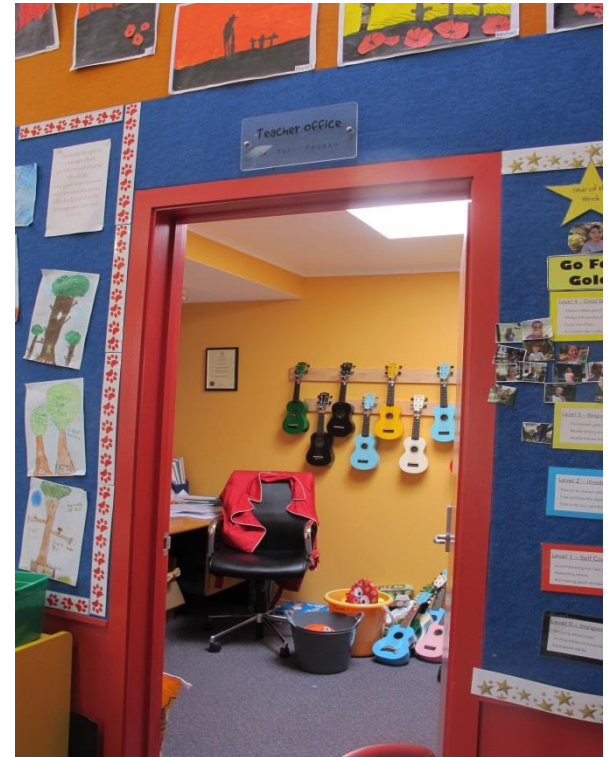
- Open inviting office area/reception
- Heat pump to warm the open plan area.

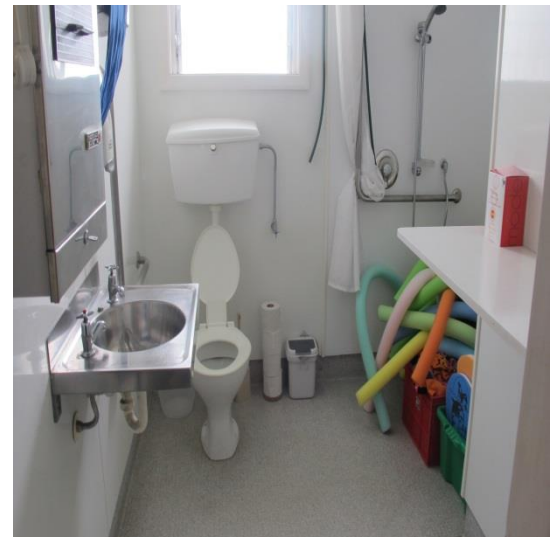


- Unisex toilets. Easy to clean, no gender identification, easy to access, warm in winter.



- Teacher offices
- Break out rooms for students





Facilities for people with limited mobility or illness.

Benefits

- Increased flexibility of learning area
- Improved aesthetic environment
- Safer, hygienic, more comfortable toilet area
- Facilities comparable with state schools
- Retention of special character
- Increased public profile

Conclusion

- Hawera Christian school should investigate strategies to modernise the buildings on site at Tokaora to enable teachers to integrate the benefits of Innovative Learning environments.

References

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