

Principal's Sabbatical Report

Grant Willocks

Temuka Primary School

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It was nearly eighteen months ago when I sat down and wrote my application for this sabbatical with the intent of studying Modern Learning Environments with the express aim that my research would impact upon my own school, Temuka Primary School. To date, I am continually amazed at how fluid our education system is in an ever changing challenging landscape of change.

As a new teacher back in the late 1980s, I began my career teaching in what was then an Open Plan Classroom. It was purpose built for innovative teachers to teach collaboratively in. Many of these hexagonal buildings, fondly described as the 'KFC' blocks, are still in existence today and the majority used for a variety of purposes, and not the least as a Modern Learning Environment as they were originally intended for.

Yes, teaching in an Open Plan in the early stages of my career was a great place to start. Sadly however, after moving away from this, my first school, did the walls come tumbling down - literally, in favour of three single celled classrooms. What was an inviting shared area for both students and teachers alike, was reduced to three individual classrooms by a decision dictated by the school based on the trend at that point of time.

Today I am heartened to see the MOE encouraging the growth of MLE's within our schools particularly at the different ways schools have developed their own prototypes of this model. The sceptics among us may question a further rise in the educational wheel and debate whether this current cycle will last the distance. My observation and experiences confirms for me that given the freedom schools now have to develop their own MLE models by engaging with and listening to their student's, teacher's and communities, we are in exciting educational times. This revolution will have a powerful impact upon our students and teachers particularly when schools manage the process of change well, together with robust and reflective practices.

In this report I intend to explore the practice of MLE's (now commonly referred to Innovative Learning Environments ILE's) and links that help promote brain development of students that work in such areas. I was able to visit a number of ILE schools within our region to observe the differing practices and models each had developed that best met the needs of their students. This report will not showcase them specifically, however I do intend to use this data post sabbatical to drive our own pedagogical direction to initiate an ILE at Temuka Primary School. To those schools who are about to consider an ILE, I



hope this collection of opinions and suggestions may challenge and ignite debate in staffrooms and communities around New Zealand.

During this time on sabbatical I wondered into the research done by Carol Dweck and American educational psychologist and her work done on the differentiation between student intelligence of fixed and growth mindset learners. I will attempt to show how an ILE can enhance this integral part of the learning process too.

William Glasser an American psychiatrist whose educational theory resonates across the world, once quoted..... *We learn 10% of what we read, 20% of what we hear, 30% of what we see but 70% of what we discuss, 80% of what we experience and 95% of what we teach others.*

So what are these Innovative Learning Environments?

A quotation from the Ministry of Education website under MLE

'The majority of school buildings in NZ were built between the 1950's to 1970's. Since then teaching practices and standards of learning have changed significantly. New technologies and building materials allow for new and vibrant and connected learning spaces. All students deserve to be taught in these Innovative Environments and benefit from these new teaching methods'.

The MOE since 2010 have published guidelines encouraging schools on the process of the development of ILE's and these follow the priority of Health and Safety, Essential Infrastructure and Innovative Learning Spaces. *'Schools are encouraged to develop shared spaces between classrooms that encourage independent learning both individually and collaboratively making the best use of spaces'.*

Prakash Nair an Australian leading authority in innovative school design offers these suggestions from his book *The Language of School Design*. In it, he questions what our schools will look like in 30 years' time and the roles principals and teachers will have within them. He gives thought to these considerations....

- Students and teachers need to be creative critical and social learners. Learning spaces need to reflect these elements.

- We need to get away from the 'factory model' where you taught the same thing to the same people at the same time. We need to develop a rich model of instruction and learning spaces to a wide variety that suit our 21st century learners
- Teachers are facilitators who guide students – as opposed to transmitting a message
- We need to get away from the notion that school is a place - that school is an experience!!
- Schools are not bound by four walls and a fence. They are a community within a community
- How best can we accommodate personalised, individual and collaborative learning using the latest technology? Connecting to the outdoors and community partnerships are as equally important too.
- We also have a role in educating our parents and community as changes will bring about fears and misconceptions
- Above all teachers and students have a real stake in this. We must listen and respect their voices and their concerns. All voices must be heard!



Mark Osborne Core Education also adds these comments from his White Paper on ILEs

- *More open and flexible spaces also create more collaborative communities of practice for teachers. Having access to the teaching practice of one's colleagues; to model and to be modelled 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. (Exert from White Paper...)

Following a conversation with Karen Boyes Spectrum Education and reading her blogs She expresses concern that without a shift in pedagogy, there is a danger that students will experience learning just in a bigger classroom with flash new furniture. The key point she makes is that ILE will only work where a sound teacher student relationship exists. It is critical that students learn about their learning. Teaching students to be independent and self-directed learners needs to be the absolute ingredient in a successful ILE. The transition from a single cell classroom requires careful planning that is delivered in a structured and scaffolded way. Karen also makes reference to these other valid considerations

1. Be clear on your underlying philosophy for learning. Does the school's new ILE learning philosophy still align with statements in the school charter and are reflected within the school's curriculum policy statements? Be clear of your definition about learning and what successful learners look like. Consider developing students into a growth mindset intelligence level as opposed to a fixed mindset. (see notes below)
2. Develop a safe environment. Students learn from new challenges and importantly from their own mistakes. Make it safe for students to experiment, take risks and expect a few falls. I like to think a learning environment is like a bouncy castle that comes to your school fair. Students are instantly drawn to them and are eager to test themselves to bounce higher and higher. They know that they are safe to make mistakes by pushing their boundaries knowing full well a crashing thud into the air pad below will cushion and protect them from harm.
3. Teach students about ownership. Students need to learn about being accountable and show responsibility. I need to do this.. I can do this again by... Too often students and adults too, get into a blame mentality whereby they assume that default status entering into excuses and levels of denial. They will often remark.... They did this...The library was closed...You didn't tell me to.

4. Ensure that students know the learning process. Sometimes when students begin an inquiry they can become confused and lose direction. Karen Boyes refers to Habits of Mind and teaching these attributes will ensure students develop resilience, creativeness, independence, problem solving etc. It is these key competencies or skillsets they will need to take into their working career. Researchers remind us that many of today's jobs won't exist by the time our current five year olds finish school to enter the workforce. It is estimated by that time, 40% of school leavers will need to find work through self-employment.



5. Celebrate the learning. – Not primarily the end result. Give student feedback about their learning journey they have taken. Praising the actual end result encourages students to be of a fixed mindset of intelligence, whereas praising students to understand and evaluate their learning process engages them into a growth mindset. This encourages learners to develop a desire and motivation to embrace change, its challenges and to persist despite obstacles they face along the way.

Brain Development

Much has been written about the development of the human brain and I am especially grateful to the Brainwave Trust and from readings of some of the research work currently being undertaken by Dr Norman Doidge an American Neurologist through his study into the discovery of neuroplasticity. Our brains can be described as 'plastic moulding' and with therapeutic manipulation damaged connections can actually be re-wired to make learning changes to the brain that were never thought possible.

Our brain stem is responsible for our basic survival mode, controlling our heart and breathing functions. The cerebellum controls the centre of movement, the limbic our home of emotions and finally the cortex, the learning centre of our brain. Our brain is designed to be continuously moulded into our environment and researchers tell us that most of what we learn comes from social interaction from data that we as humans gather during our formative years. Our brain is continuously developing and deemed to be fully wired for learning by the ages 18 – 24 as females whereas the male brain reaches this milestone later from ages 22-32!

As we learn through experiences neurons in our brains make synaptic connections. Each time we repeat a similar learning experience these connections become much stronger

as a layer of myelin wraps around them as a form of protection, however these can be damaged as the result of an accident, exposure to severe trauma, alcohol and drugs etc. During the last 20 years neuro physicians have made exciting progress in the understandings of the functioning of the brain and they can now dismiss long standing myths about treating patients who suffer from mental diseases and illnesses. Where neuron pathways were once blocked messages can now be re-routed to enable these new synaptic connections.

Chemical endorphins released through experiences including exercise, laughter and singing also help to strengthen these lifelong connections. Regular practice helps strengthen brain muscle and new challenges and activities fine tune our brains to make us even smarter. Some basic activities such as playing memory games, reading, problem solving, a balanced diet, regular sleep and exercise will not only stimulate our brains but will continue to grow this powerful muscle.

So how can students learning in an ILE help promote healthy brain development in our students? From my research there are both a variety of positive and negative impacts associated with brain development of our students. I see some of them as the following..

1. Relationships – In any teaching environment regardless of whether it's a single cell classroom or ILE, a successful working relationship is paramount whether it be teachers with teachers, teachers and students, and students with students. You can argue that some students form better attachments, when the environment is smaller e.g. a typical country school environment



or particularly when the ratio of teachers to students is at its highest. Educationist John Hattie disputes this, stating students do learn best despite the numbers game when the relationships that exist between teachers and students are at their soundest. When a warm learning relationship has been established which is positive, happy, friendly, and non-threatening, the brain stem is at its calmest. This is the most optimum time for learning to occur. An inviting ILE will certainly help teachers who do face these student challenges throughout the daily rigours of the job.

2. Personalised Learning – Students greatly benefit when they are empowered into their own learning. They develop a sense of ownership and are motivated towards the end result. Students need to be encouraged to form a mindset of growth intelligence where barriers can be worked through using independent resilient work ethics. The more these examples are carried out repeatedly the greater the neuron connections are affirmed particularly in the plasticity of brain functions. Plasticity is where the four sections of the brain work together inter connecting the

neuron pathways. Students must learn strategies about learning, what helps them learn and what to do when confronted by...What happens next? Some students find this challenging particularly when they have a learned helplessness behavioural characteristic. Next step learning rubrics are certainly useful in this instance as these give students guidance and a clear sense of direction. Teachers in an ILE have the ability to make effective use of cross groupings of students in all areas of curriculum. From these, teachers use their specialist skills to target students of need. Students benefit from a range of adults in this team environment sometimes referred to as 'Power Teaching'. Not every student naturally bonds with their teacher and or peers but an ILE allows for greater relationship choices. Scaffolded cross grouping helps to reinforce key messages that help strengthen connections with our brains.

3. Spaces for Learning- For years students have been taught the same messages using the same techniques, sitting behind desks with the teacher leading from the front. ILEs now encourage schools to create effective use of space in a multitude of sizes, locations, elevations etc. Attractive and appropriate furniture can be used by students to create their own special area, one that makes them feel happy and secure in the knowledge that this makes a difference to their learning style.



Students enjoy the freedom to feel the intimacy of a private space whereas others appreciate learning in a bigger social space the ILE can also provide. In my opinion, physical outside space is an area that schools underutilise. Fresh air, water and exercise are important elements of healthy brain development. Students and in particular those diagnosed with ADHD etc, greatly benefit from physical activity.

4. Use of technology- Much has been written about the educational value students get from these tools. The students relish the use of technology and experience little inhibitions when using devices for learning enhancement. When these skills have been quickly mastered students they can be empowered to teach others. It is important that devices are carefully managed and are used as key learning tools rather than time fillers as can easily happen. I feel it is important that devices shouldn't curb a student's natural desire to create, hypostatise, explore, and invent for themselves.



Developing Growth Mindset within an Innovative Learning Environment

Is brain intelligence something we are inherently born with or is it something that can be developed? Researchers now confirm that the brain has a huge potential for growth and change throughout life. Brain damage through accident or injury can be repaired through re-routing key learning messages into different parts of the brain. Brain scanning technology continues to rapidly

advance allowing doctors to make assessments without invasive and dangerous surgery procedures. Brains are stimulated through increased intellectual activity and through regular muscle growth continue to develop in all stages of life.

Carol Dweck a Stanford University psychologist studied the difference between learners, those of a fixed view of their intelligence mindset and those who adopted a growth intelligence mindset. She concluded that students who have a fixed mindset to learning limited their achievement. Students from this mindset saw their mistakes as negative setbacks tended to avoid challenges. They saw effort as fruitless often ignoring feedback and became threatened by the successes of others.

Students however with a growth mindset embraced challenges, saw barriers positively, learnt from criticism and gained inspiration from the successes of others.

Teachers in an ILE have a powerful influence to develop their students into the growth mindset of intelligence. More and more research in psychology and neuroscience supports the growth of mindset intelligence. The brain has more plasticity to grow brain muscle and dedication and persistence in the face of obstacles are the key factors of outstanding achievements. Mindset can be changed and brain neurons can be developed to become stronger through experiences and positive challenges.

The way teachers use praise, influences students into either a fixed or growth mindset. Studies show that teachers who praise students with generalised statements pertaining to the end result of work completed, then place learners into a fixed mindset. Some examples of this would be... Great results in your test, you're a star....I'm so pleased that you scored so highly I'm proud of you.....You got a high score without studying good boy/girl

However teachers who actively praised students for their processes they used along their journey gave them messages that encouraged further learning and a growth mindset. The brain learns from these warm stimulating positive messages and learns to search for similar experiences. Teacher comments need to be something like..... I like the way you battled away withto form your conclusion.....Taking time to go back and check your work has produced a great result.... Students become managers of their own learning and show resourcefulness and resilience. Researchers tell us that in the formative years of brain development we should devote 70% of praise to the learning process and 30% to the actual standard of the work being assessed. In the middle years (Yr3-6) this balance should become 50/50%. By Yrs 7-10 students should have growth mindset ingrained in their learning so the balance can shift to 30% of the process and 70% of the actual result.

Conclusions

Where to from here??

Each school will need to make its own conclusions on how this research will best suit their school, their pedagogy, charter and curriculum. Together with your own research, findings and investigations, staff buy in and strengths you will find what is best for your school community. I will be reporting to my own Board on how best this research will work on our ILE.

We as a school are excited about the potential and possibilities our ILE can have on the school as a whole.

I wish to thank the following schools for allowing me to visit, our stimulating conversations plus permitting me to record many aspects of excellent practice that were clearly evident. It is my intention to use this vast jig saw of material and opinion gathered to develop our own flagship MLE model based on my new pedagogical beliefs using the existing physical and financial structure we have at Temuka Primary School.

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Grateful thanks

Grant Willocks



Temuka Primary School

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Beckenham School	Principal	Sandy Hastings
Bluestone School	Team Leader	Georgia Jackson
Breen's Intermediate School	Principal	Brian Price
Clearview School	Acting Principal	Angela Scott
Clarkville School	Assistant Principal	Linda Baran
Gleniti School	Principal	Steve Zonnevylle
Ladbrooks School	Principal	Sean Bailey
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