

Theory

Theories about learning-how-to-learn are an essential ingredient to the Infinity Learning Maps approach

A theory is a set of linked ideas that explain why we go about doing things the way we do.

There are two types of theory discussed in this section.

- The confidence-building *design theory* that underpins the set of Infinity mapping activities.
- *Children's theories* that explain their personalized approaches to learning-how-to-learn.

We encourage teachers, in particular, to understand both types of theory before facilitating the Infinity Maps activities with their students and their families and whānau (New Zealand indigenous term for a community of related families).



Design theory

Design theory underpinning the Infinity Learning Maps approach is based on building confidence in all children to deal with learning-how-to-learn decisions.

All children and young adults face a wide range of decisions about the way they go about their learning.

Do your students dive into learning without a second thought?

Or

Do they connect with trusted others and proceed with caution?

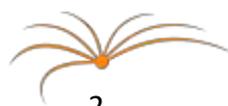
Or

Do they avoid decisions altogether and drift along using 'same-old-same-old' routines?

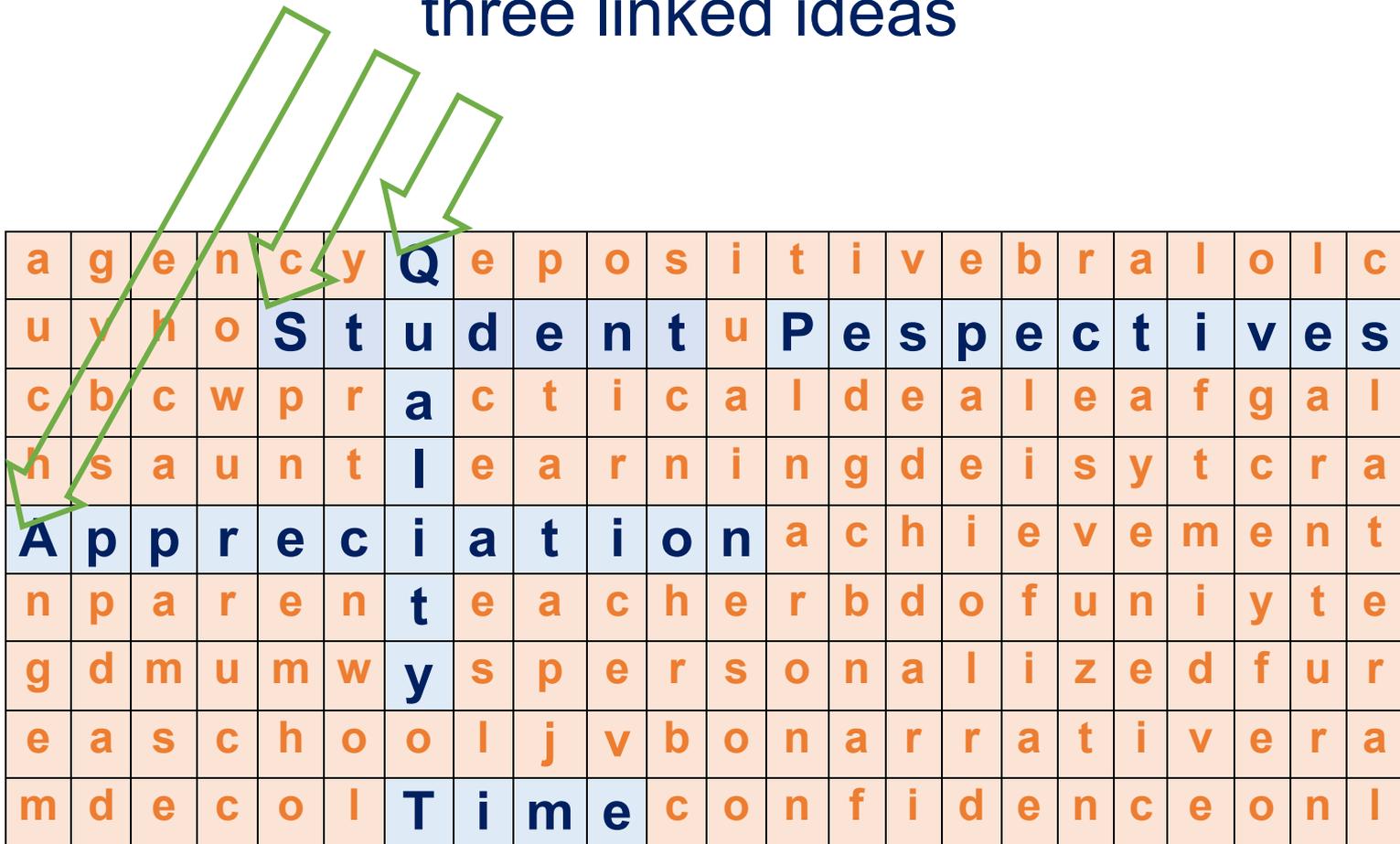
If your students make sound decisions, particularly at an early age, they can create vastly different learning and living trajectories. For instance, a quiet child decides to start asking more questions for understanding, which sets her/him up to handle more challenging curriculum.

Too many children, however, do not know how to make those decisions and/or are consumed with other big and small decisions in their lives. Learning decisions can be left too late, often causing regret among students, teachers and parents.

The Infinity Maps approach builds confidence in students to deal with the myriad of learning-how-to-learn decisions that arise as they progress through the schooling system.



In designing the Infinity approach,
we used
three linked ideas



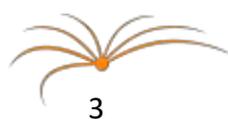
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m	d	e	c	o	l	T	i	m	e	c	o	n	f	i	d	e	n	c	e	o	n	l

Find 20 words related to Infinity Maps just because you can!

Our overarching design theory is to grow confidence among students to constantly improve the way they go about their learning.

Our three linked ideas create the conditions to build confidence and successful students;

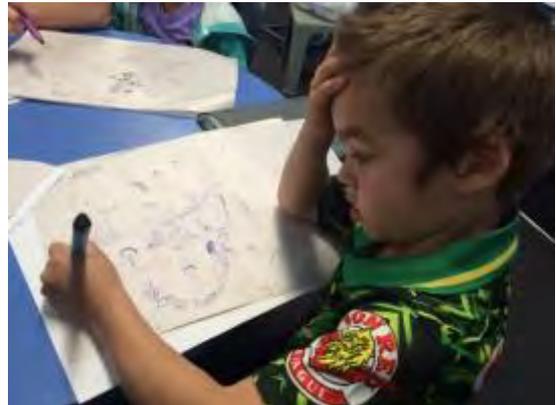
- appreciate all your students as capable learners,
- engage your students in understanding and actively developing learning ecologies and,
- create quality time to support your students to stop and carefully reflect on their learning.



First idea: Appreciation

The first idea is to adopt an appreciative view.

Appreciate the capability of your children and believe that they can map their current learning situations and decide to change tack or hold strong.

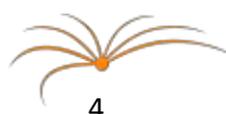


Almost every child can draw a picture of the people, the tools, the interactions and the places that help them in their learning.

For the few children who cannot do the tasks, such as children with serious disabilities, their parents, caregivers or second language interpreters can provide more support or even complete the tasks on their behalf.



In those cases, be careful to explore every avenue to involve the children. Creative approaches using modern technologies have been known to expose capabilities of children with disabilities that can surprise adults in caring support roles.



An appreciative approach removes deficit thinking about gaps and deficiencies. Children are typically hypervigilant towards adults with deficit views of them. It is hard for adults to hide those views and children see and feel those views; eye contact, voice tone, negative scripting of their learning, a sense of not measuring up. Shoulders go down, confidence drops and spirals of disengagement set in as children become anxious about their capability to learn. Often, many children live out the negative stories scripted for them.

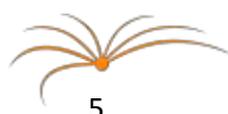
Using a foundation of positivity, teachers can support all children. They can champion the positive scripting with children who already see themselves as confident and capable learners. They can also help re-script stories with those



children who have come to believe that they are not-so-capable (see Sax, 2011; White, 2007; Cooperrider & Whitney, 2007).

Being appreciative of children's capabilities lifts shoulders, creates smiles and laughter and invites success no matter how challenging the learning situation. Even the word 'challenge' can be seen in a positive light.

Challenges are something that everyone faces in their learning from time to time. They can be seen by children as exciting adventures, like going into and getting out of the 'learning pit' <http://www.jamesnottingham.co.uk/learning-pit/>



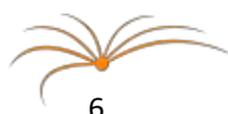
Second idea: Student's perspectives

Educators around the world are talking about learning ecologies. What are the student's perspectives about that concept?

Many children's first attempts at drawing an Infinity Learning Map show a school-centric view of learning with a few references to peer learning and to home-based learning. As your children view each other's maps and start to expand their knowledge about broader learning outside of school and home, students start to map their personal learning ecologies.

While the concept of merged learning environments has gathered traction, most current learning environments remain strongly centred on schools. However, pockets of innovation are beginning to break down divides between school and broader community learning. Digital domain and learning partnerships between schools, communities, universities, businesses and industries have accelerated the focus on learning ecologies. Going forward, opportunities for young people to learn both inside and outside of school seem boundless. Infinity Maps provide a practical way for students to map their perspectives on how their learning ecologies look now and the way they can expand in the future.

Experts around the globe... are sharing their views about the emergence of learning ecologies as the next step to improve schooling systems. Politicians, school leaders, researchers, business leaders and entrepreneurs are busy holding global think tanks, producing visionary papers and formulating government policies along those lines <http://gelponline.org/>



Leaders in the middle of schooling systems..., such as principals and professional development providers, are equally busy working out how to merge the compulsory curriculum with the broader interest-based curriculum associated with global citizenship.

What actions can students take to develop their learning ecologies?



School leaders
Far North , NZ



Technology support, New York



Senza
Tactile Zaino
learning, Italy
Senza Zaino,
Italy



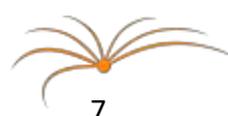
Infinity Learning Maps, Australia



Robotics
India



Future learning
environments, Oman



We believe that students will benefit by being involved in conversations about future-focused learning. Furthermore, we believe that the children's subsequent actions after engaging in these conversations are likely to influence the pace at which schooling systems make the move from school-centric to ecological learning environments.

The Infinity Learning Maps approach is a practical conversation starter for children to talk with their teachers and parents about their learning ecologies and how they align with global trends in learning.



Third idea; Quality time

People typically live fast and busy lives in the modern world.

Nowadays, people tend to have considerable interest in learning, but they have little time to stop, reflect and carefully consider the way they go about learning.

Infinity mapping starts by slowing the pace. Students, teachers and parents are asked to stop and think carefully about the students' current learning situations. Many teaching professionals and parents find it hard to set aside quality time for that purpose. However, it is worth the effort.

After pausing and reflecting at the start of the Infinity Maps process, the activities center on students using their agency to make a series of rapid personalized adjustments to their learning situations. Designing Infinity Maps to include both slow and fast pace activities have proven to engage students, teachers and parents in some useful deep thinking at the outset and some equally useful rapid decision-making along the journey.



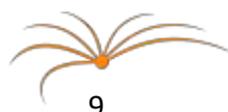
Infinity Maps capitalize on the human interest of merging both non-digital and digital activities.

Children and young adults enjoy spending time on non-digital activities of drawing pictures, an aesthetic pleasure for most. Most young people also enjoy modern day digital devices and social media.



They enjoy discussing their maps with their teachers and parents in a safe and secure environment. View Awanui and Melodie who set aside quality time to discuss their own priorities and order their shared thinking <https://youtu.be/ttWglSeLD5s>

We believe the blended use of non-digital and digital mediums is a critical skill for children to develop for future job markets. For instance, an artist living in our modern world paints a beautiful picture and displays it in an art gallery (non-digital). The artist also promotes the painting on Facebook, Twitter, Instagram (digital) and sells it for a good price, which provides the artist economic security and gives her a sense of pride.



Children's theories

Every student has their own theory that explains how they learn.

Students construct in their minds a set of ideas that drive their learning and, with the right prompts and props, can talk about their theories. Some children can talk with ease about their personal theories of learning. Others take more time to articulate them. Infinity mapping activities provide the time, space and patience for every child to articulate their learning-how-to-learn theories in conversations with their peers, teachers and parents. Through those conversations, students;

- better understand their own theories,
- evaluate the usefulness of their theories, and
- consider changes to improve how they learn.



Every student's theory is personalized with distinctive twists and turns that script unique stories of learning.

- Some students opt for an interactive theory. They collaborate with interested others to build knowledge and skills in particular areas.
- Some children prefer a localized, routine-oriented theory. Those children tend to engage in repetitive practice with the same people using the same tools day in and day out in a familiar place like a classroom or a gym.
- Other students prefer an individualized theory. They often like to learn alone and engage in trial and error activities. For example, they break things and put them back together in a garage, den, bedroom or in cyberspace.
- Some students choose to mix up the way they go about learning, while others prefer to stay with routine strategies.

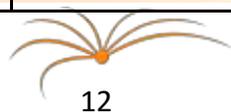


We believe that every child can evaluate the effectiveness of their theories. They can make improvements and be courageous enough to hold on ways of learn that work for them.



Below are a few examples of children's theories and their thinking about improvement. They are succinct, matter-of-fact and free of jargon.

Theory	Students changing their theories
I need more peer critique and challenge to develop my cognitive capability.	"I find learning easy at school and enjoy helping other students who are struggling with their learning. I am starting to think I should spend a little more time with other students at my own level or higher to push myself."
Staying 'under the radar screen' is not such a good idea.	"My mum and dad tell me not to get into trouble at school, so I tried hard not to annoy my teacher by asking questions. Instead, I got the mathematics answers from a friend. That worked for getting the answers right but I could not figure out the answers on my own. I was kidding myself really. The change I had to make was to ask my friend to help me figure out the answers."
Being conscientious and compliant can lead to 'busy' learning.	"I thought I would please my teacher by going to all the writing workshops. But I never got to write a story from start to finish. So the change I made was to go to selected workshops, the ones that would help me improve my writing, and take time to finish stories. I fretted a bit about not going to all the workshops but my teacher did not seem to mind at all."



Children and young people are typically not asked about their theories of learning. They tend to be bound by the theories of learning and living held by the adults surrounding them. Adult direction of this nature mostly occurs with the best of intent to safeguard their children and to do the best **for** them. A teacher comments <https://youtu.be/6s2TOWMotpM>

Infinity Maps change those dynamics by raising the profile of the student's perspectives and actions without losing the intent of safety and doing the best for children and young adults.

The mindset shift for adults here is to consciously think about when it is best to make adjustments to learning situations **for** children, **with** children or leave them to independently adjust their own learning.

To find out more about this concept refer to the section 'Setting the Scene.'



References

Cooperrider, D. L. & Whitney, D. (2007). Appreciative Inquiry: A positive revolution in change. In P. Holman & T. Devane (Eds.), *The change Handbook*, pp 73-88. San Francisco, CA: Berrett-Koehler Publishers.

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Sax, P. (2011). Reauthoring teaching: New developments in creating a collaboratory. *Journal of Systematic Therapies*, 30(2), 98-1004.

