Infinity Learning Maps to Grow Student Agency

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Contact us at info@infinitylearn.org for support to use Infinity Learning Maps

Infinity Learning Maps are a vehicle to grow student agency by connecting students, teaching professionals, families and whānau with one another and to global trends in learning. They are also a useful evaluative tool to review the growth of agency and the movements towards future-focused learning environments.

A few quotes provide an insight into the power of Learning Maps as an exciting and engaging new evaluative tool.

Student: *"Learning Maps helped me be a more active, connected learner."*

Teacher: *"Learning Maps made me realise I had to change my practice."*

School Leader: *"Learning Maps were the catalyst to change in our school."*

Parent: *"Since Learning Maps, I need to take a 'guide on the side' kind of role and praise her for being an active learner."*

Are your students who are challenged by academic learning growing more agency? How do you, your students and their families and whānau track the growth of student agency overtime? Is that growth pattern contributing to the development of a future-focused learning environment?

Infinity Learning Maps provide support to answer those questions. We have seen Learning Maps support those students to become far more active, more collaborative and start innovating to resolve the challenges surrounding their learning. We have witnessed groups of them step up in this way in various projects over the past few years and the results are remarkable. Projects, however, come and go. Our aim is to diffuse the mapping exercise into system-wide efforts to create future-focused learning environments as the norm.

A 'future-focused learning environment' means much more than modern building spaces and digital technologies. They are about linking with global mindset and practice shifts around moving from the known to the unknown: *from school-centric to ecological; from individual to connected; from passive to interactive; from competitive to collaborative, and from deficit to appreciative.* Silo walls come down as lateral connections form within and across schools, communities, businesses, government agencies and the physical environment. These shifts create a rich and diverse tapestry of learning activity that is merging formal structured learning with informal interest-based and authentic learning.

Where do the students who are challenged by academic learning and their families and whānau fit into this picture? Students and their families need to know, and in fact want to know, about the global shifts that are occurring from past to future-focused learning. They grow in confidence by reviewing where they are in relation to those shifts. Then with that newfound confidence the students can and do take responsibility to make changes to their strategising around academic learning, well-supported by their teachers, family and whānau

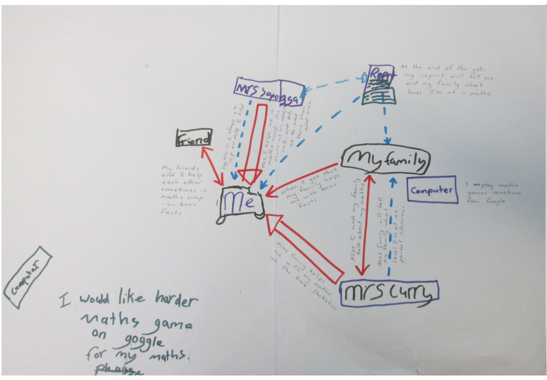
Infinity Student Learning Maps

Students draw Learning Maps to show elements of their current learning environment. Drawing the maps is a disciplined process that also invites flexibility and adaptability. Students share their maps with one another and analyze them to identify patterns that point to change priorities. Each student then enters explanatory data about their map into a personalized online-database. The students identify one or two change priorities to meet desired academic goals. *What am **I** going to do differently to improve my learning situation?* The student's teacher and family members also record what they intend to do differently to support their children to make the changes. Students then produce a 2-minute video that describes their map and the change priorities they will make to create the academic lift. Teachers, family and whānau also document online what they will do differently to support their student/child.

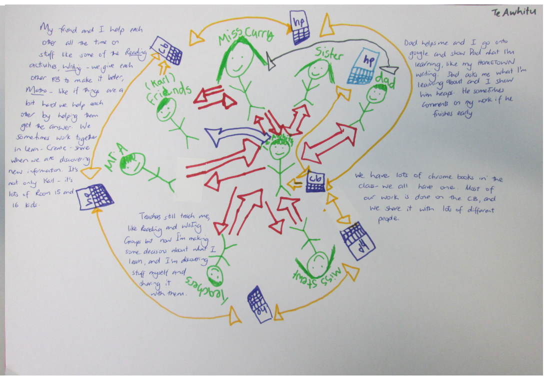
An example of a Student Learning Map

Here is an example of two Learning Maps designed by Te Awhitu, a 10-year-old boy at Rata Street School in NZ who was working below standard in reading, writing and maths at the time of designing his first Learning Map.

Learning Map 1, created February



Learning Map 2, created October



This video provides an illustration of Te Awhitu explaining his Time 1 and Time 2 Learning Maps. He self-recorded the video with a little support from his teacher, then shared it with his Dad for review and created a second recording based on his Dad's feedback. Te Awhitu grew considerable awareness of his learning environment and took far greater responsibility to change things to achieve his academic goals. This is a great example of student agency in action. As his Time 2 Learning Map shows, he is now far more connected to people and learning tools that enable him to take more control of his learning. Te Awhitu's

teacher also adjusted her agency based on her changes in practice to enable Te Awhitu to become more interactive and connected. His Dad also changed the way he interacted with Te Awhitu and his learning. Both the teacher and the family introduced technology, which enabled Te Awhitu to grow his agency and to create closer learning connections with school and home.

Five ideas underpinning Infinity Learning Maps

Infinity Learning Maps have been informed by five ideas that the authors experienced during their careers. They managed to link together those ideas in recent years as they grappled with making mindset and practice shifts from past to future-focused learning. These five ideas create a theory that despite some students being challenged by academic learning, it can be a pleasure for them to identify those challenges and use their strengths and support of their teachers, families and whānau to address them.

Idea 1. Infinity Learning Maps capitalise on the human interest and aesthetic pleasure of drawing pictures in the modern world.

Humans have enjoyed drawing pictures in diverse ways for various reasons for millions of years. Experimentation with the idea of students drawing pictures of their current learning situation, inclusive of its challenges, as a liberating experience, found that most children thoroughly enjoyed the exercise. Adding a digital video and data gathering exercises to the non-digital drawing task heightened enjoyment. We discovered that the combination of a long-standing non-digital task with modern-day digital tasks generated authentic engagement and excitement around addressing learning challenges. It was a positive alternative to adult-driven gap-analyses and problem identification around learning challenges that typically caused feelings of concern and disappointment among students, teachers and families.

Idea 2. It is better to analyse the current learning situation than jump straight to solutions (Annan, J., Annan, B., Wootton, W., & Burton, R, 2014).

The maps prompt students to draw their view of what is happening in their learning currently and then to think about their aspirations for the future. With a real-time picture on the table, students, teachers, families and whānau have a tangible frame to stop, reflect and think deeply about changes that would most likely create better conditions for learning. As those groups make agreements about change, there is necessarily agency re-adjustment occurring among them. Student agency tends to immediately rise, as the students take ownership of the mapping exercise and comes up with new ways forward. Teachers, family and whānau adjust their agency is altered as they learn to support the students' more self-determined direction setting.

Idea 3. Positive energy and new hope for success grows when children are supported to externalise their challenges (Epston & White, 1992).
It is not the child who is the challenge. Rather, it is the practices and interactions between children and their environments that create challenges. When children learn to externalise their learning challenges, they grow confidence in their strength and ability to take responsibility to address those challenges, particularly with the support of their peers, teachers and families.

Idea 4. Each map is personalized to the student.

The maps, explanatory videos and conversations with teachers and family members are created by and hence unique to each student. Conversations about the maps are also completely jargon-free. The entire experience goes to the heart of how each student views their learning and what they need to change to lift their academic learning experiences. There are also spin-off personalised mindset and practice adjustments for teachers, families and whānau. Everyone has to re-think and adapt for all children to succeed.

Idea 5. The Learning Maps process shifts the students from being passengers to drivers of their learning. This is our game-changer theory whereby students expand their learning horizons through their own internal desires, with positive and patient support from teachers, families and whānau. Teachers, families and whānau are not pushed into the background; rather they are joined at the hip with the students. But the students have clear responsibility and agency to design their own maps, to analyze trends, to identify and make changes and to assess the impact of that change on their learning. This video clip captures the students shifting from passenger to driver Active learners

It is OK to get excited


Use of the Learning Maps over time is creating unprecedented confidence and engagement in academic learning among students, teachers families and whānau. As one teacher commented recently, it creates a hunger for success in learning among those students:

> *"they believe in themselves now...they believe they CAN do it! And once they taste that success, even if it was only a little bit...they believed even more, and wanted it even more!"* (Glenda Stewart, personal communication, 18/12/2014).

Here in lies a dilemma. Terms such as 'new', 'exciting' and 'hungry for success' are typically discounted as 'promotional' in the fields of school effectiveness and improvement. Yet they are essential for innovation that creates shifts from past-focused school-centric to future-focused ecological learning. The dilemma for

schools, communities and governments is to decide what aspects of past-focused education are worth holding on to and just how innovative they are prepared to be to step into the future. Learning Maps are useful as a tool for those groups to make those decisions.

Research into Learning Maps

Our research project earlier in 2015 aimed to assess the perceived value to participants of the Learning Maps and to identify the types of activity that participants chose to support students' learning (Annan, J., Annan, B., & Wootton, M, in Draft). The research involved over 300 students, their teachers and family and whānau. The study took place over a 4-months period in which students, teachers and families came together three times to draw, redraw or revise their learning maps and to plan and discuss changes to their learning environments.

Students entered data into an on-line database within the Infinity website as they worked through the Learning Maps process. Students loaded their maps, videoed their discussion about their maps and noted the people, places, tools and relationships that supported learning. They also set change priorities, listed the actions they would take and recorded their progress in making the changes. Teachers, families and whānau made comments on the students' information and noted the actions they would take to help their child or student achieve their goal. In addition, more detailed data were collected through focus groups and a survey of the perceived usefulness of the Learning Maps. Information was collected after the first and last Learning Maps sessions.

Findings from the research indicate that the Learning Maps are proving to be useful in a number of ways to grow student agency and adjust the agency of teachers, families and whānau. By the end of the three-month period, the results from the multiple data sets showed that all participant groups found the Learning Maps helpful for a variety of reasons (see table below).

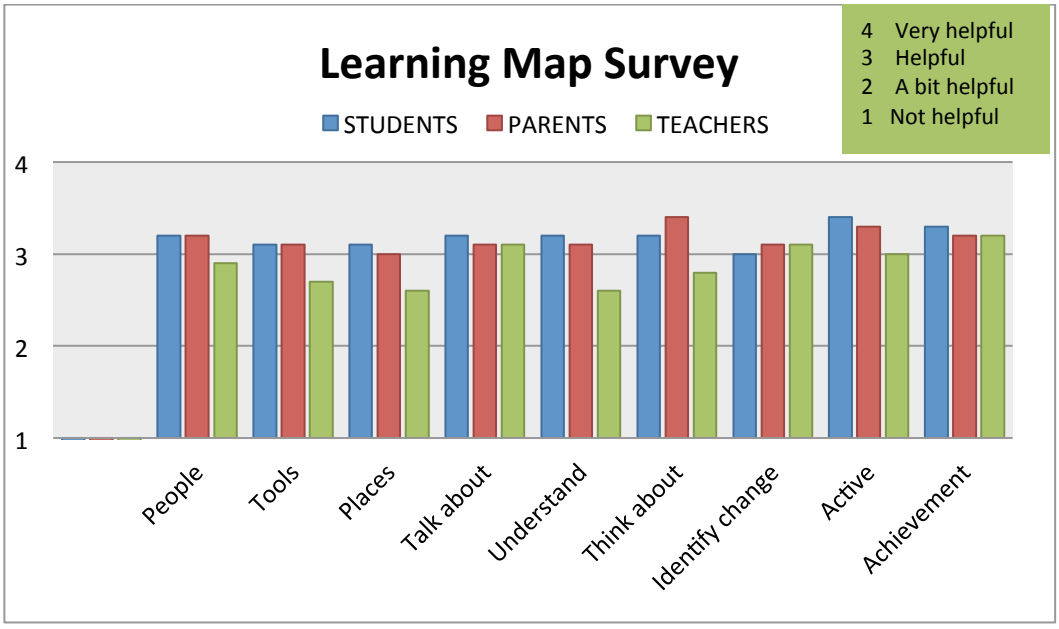


Figure 1. Perceived helpfulness of the Learning Maps to support specified learning.

The findings below show positive in all three groups of participants- students, teachers and families

Students

Students sought to become active learners and to share responsibility for directing their learning. The majority of students addressed their change priorities or were 'nearly there'. Strategies they selected at the last Learning Maps session involved developing learning relationships and extending their learning environments in contrast with the baseline strategies of managing tasks and practicing.

- *I usually help others and used to tell them answer but now go through things step by step and learn from them as well by seeing what strategies they use*
- *Learn at lots of places, do activities everyday - music helps with maths, guides helps with crafts and maths, school, library, museum to learn history, learn from hockey, computer coding class*

Teachers

The nature of the strategies used by teachers started with the provision of additional exposure to schoolwork (e.g. longer time) and monitoring. By the end of the project, teacher strategies had generally shifted to supporting students to co-construct new strategies, connect with other people and engage in personalised learning.

- *It is about changing perceptions, getting to know families and how they are connected to each other.*
- *Noticed that the kids are more engaged*
- *Confidence in some has increased. [they are] more switched on to their learning*
- *Kids more articulate with each other about what they are learning outside of school.*

Families

Family strategies, initially involved general offers of help. Traditional homework tasks became increasingly focused on supporting active and personalised learning and providing feedback. Families indicated that preparing their children for a new and unknown future world was a high priority for them.

- *[I] hadn't taken a step to think about how education had changed in schools yet, gave an opportunity to do that, to stop and think about how they learn*
- *Work environments have also changed so why wouldn't it be different in schools*
- *Now more aware that interactions and sharing information are key to learning, learning outside of school and being explicit in highlighting it is an area for learning. Making connections between community situations and learning*

In summary, the research found that participants considered that the Learning Maps process was useful for examining and extending the students' current learning environments and supporting their active involvement in learning. Over the four-month period of the study, the strategies selected by students, teachers and families to address their change priorities shifted from routine, traditional practices to those that supported active, personalised and future-focused learning.

Conclusion

Learning Maps have proven to be a useful tool to engage children, families and whānau in new and authentic learning partnerships with teaching professionals. They are also proving to be a useful evaluative tool for those groups to assess the growth of student agency and the movement towards future-focused learning environments. These two developments around new partnerships and new metrics are critical to NZ's schooling system making some serious in-roads into the education equity challenge.

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