infinity

WHERE THE LEARNING NEVER ENDS

Trends in learning

Before starting the Infinity mapping with your students, take time out to make sure that you understand how this process is linked to innovation around the latest global trends in learning.

Start the discussions with your teaching colleagues and become familiar with talking
About
Global trends
In learning
Which global trends are most relevant for your context?

We have provided you with three frames that we have proven popular in collegial conversations before starting the mapping exercises. These three frames can be used in any order.

- Five global trends in learning
- Images of future-focused learning environments
- Shared locus of control

You know your contexts of learning better than we do. Adapt our frames or find the frames in cyberspace that are most useful for your context.

Global trends in learning

The slide below outlines five global learning trends.

We identified on these five trends after participating in a series of international conversations from 2010 to 2015. School, university, government, business and entrepreneurial leaders from 13 countries met to discuss past and present learning environments with the intent of shifting to future-focused learning http://gelponline.org/.

We were drawn to discussions about personalized learning that aimed to realize the potential of all children to succeed. A video of a study visit to New York City's i-Zone captures the essence of those particular discussions. http://gelponline.org/?q=node/111

We examined the relevance of the global trends with school leaders and teachers involved in New Zealand's Ministry of Education 'Learning and Change Networks' strategy (Annan & Talbot, 2013). As designers and facilitators of the strategy, we aimed to transfer the international discussions into the student-teacher-leader-family groups. Learning maps featured as one tool among others to catalyze the conversations.

Each global trend shows two ends of a continuum going from right to left

The concepts on the left side are not redundant. Knowing things, for instance, remains important to people worldwide.

The sophistication of modern learning and living is providing people with new possibilities to push out the boundaries of the way they do things

Debating the value of the concepts on the left and right of the diagram energizes teachers and school leaders to consider where they fit on each continuum.

Here is a little detail about each of the five global trends

This trend is about the merging of academic learning with broader interest-based learning and encouraging students to take risks in their learning.

Students must master foundational academic knowledge to succeed. Academic mastery requires high quality teaching with deep inquiry into foundational curriculum knowledge (Timperley, Kaser & Halbert, 2015).

In the past, students were typically taught to
retain academic knowledge
and to use their memory to retrieve that knowledge when required.

Nowadays, with modern day technologies, students appear to be comfortable when there is greater opportunity to store information where it can be found when needed.

Many students are learning to develop greater
retrieval capability
to access and use knowledge in context.

Many students develop these skills with relative ease. This is possible because in our modern world, knowledge resides in a wide range of easy-to-access repositories and interconnected digital and non-digital nodes. Trending shows students worldwide have an intrinsic interest in the emerging meshed networking environment. Successful students will be those who continue to engage in inquiry-based learning and explore the ever-broadening meshed network of learning available to them. These students are merging formal and informal learning (OECD, 2015).

These students will push their boundaries of learning, take-risks, be resilient and innovative

This trend focuses on the merger of formal and informal learning inside and outside of schools.

Schools remain safe and secure places for children from age five through to 17 or 18 years to learn and live during the working week. However, reliance on school-centric learning is diminishing as many students access curriculum knowledge and interest information, beyond the classroom walls with considerable ease.

Place-based learning is featuring as a way to explore the world through school partnerships with family, community, business, environmental and cyberspace sites http://www.theskoolproject.org/#mission .

Furthermore, many students are creating a demand for their teachers and school leaders to acknowledge and integrate their learning interests and passions into everyday school life (Fullan & Langworthy, 2014; Dumont, Istance & Beavides, 2010).

Many teachers are responding positively to integrate passion learning, environmental improvement and community-business-school partnership projects into their teaching and learning schedules. Watch how the catch phrase 'learning ecologies' infiltrates schooling and workforce pathways policies over the next few
decades.

Where are you, your school and your district placed with this trend?

Governments and Departments/Ministries of Education worldwide aspire to climb the OECD ladders of international surveys, particularly around foundational academic knowledge. Most school leaders and teachers have fallen in line to ensure that schools have become adept at analyzing and using student achievement data as evidence to monitor and improve each individual child's academic learning.

There is, however, an emergent expectation that schools will think and act as collectives by creating local clusters or,

networks of schools.

Schools are also being encouraged to partner with communities and businesses and invent broader national and global connections for the future (Mumby & Fullan, 2016). This trend to adjust from being individual to connected was led by the business world thirty years ago to counter past competitive environments associated with self-managing firms (Wenger, McDermott & Snyder, 2002). Schools are now catching up with the business trend.

There is also considerable interest among educators to integrate,

lateral learning

into schooling systems as a useful lever to stretch students from developing social ties with one another to forming more critical and challenging cognitive ties (Dumont, Istance, & Beavides,2010). If students are learning about something they are passionate about, you will not be able to stop them connecting and learning with others

Despite the growing interest in networking and lateral learning, most school assessment systems continue to focus almost entirely on the individual.

Is that the right message for young people in a connected world?

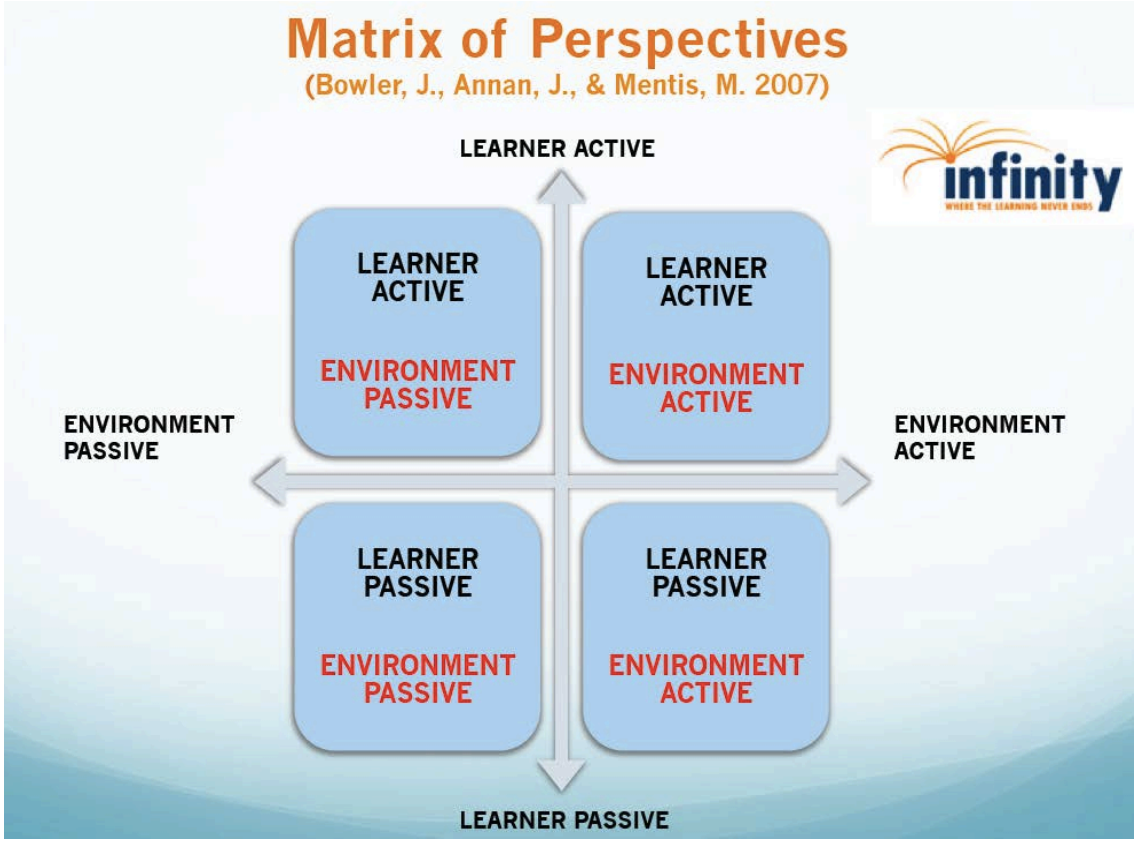
This trend is a shift from passive acceptance of pre-planned direct instruction, to interactive learning with peers, teachers and others who can inform the learning.

In the modern world, becoming active and interactive are essential capabilities for learning and living (Hannon & Gillinson, 2013). Teachers also have to deal with the tension between controlling students and encouraging them to lead their own learning (Rajala et al, 2016).

Step back and consider whether your students' learning environment is passive or interactive.

- A passive learning environment: "If they do not know, tell them." Passive teaching professionals and students typically accept without question standardized curricula, learning progressions, resources and evaluation methods. Control is maintained and generic information is successfully spread across large numbers of teachers and students. Results focus on compliance and firm boundaries around truths and existing knowledge.
- An interactive learning environment is created when the agency tap is turned on by school leaders, teachers and students. Each is aware of the passive to active continuum and its implications for learning environments. They collectively, analyze, critique and challenge past-focused ways of learning. They are supported to see beyond the formal curriculum and embrace the broader curriculum associated with becoming global citizens (Fullan, 2013). Results focus on discovery of new and interesting knowledge and challenging accepted truths and knowledge.

The following diagram provides a frame to consider the extent to which your learning environment engages both the learner and the environment as active or passive participants (Bowler, Annan, Mentis, 2007).



Schools that create interactive learning environments will enjoy the benefits of engaging teachers, students and parents as critical thinkers and active explorers of learning for the future.

Global Trend Five

Known to unknown

Schools to Ecologies

Individuals to connected

Passive to interactive

Needy to appreciative

This trend is a shift from adults addressing student's needs, to students addressing their own needs, with the right type of scaffolding from teachers and parents. Not too little and not too much.

This shift is about teachers and parents developing an appreciative view of children and young adults as capable learners

Teachers and parents typically spend endless hours doing things **for** their children, most often with the best intent. This is not surprising. Systems, policies and various notions of child-rearing introduced over time have led teachers and parents to do things **for** their children that they may have been able to do themselves. A consequence of over-scaffolding is that many children and young adults have become passive in the learning process.

Teachers and parents can find out what their children do know and how they are thinking about improving their learning (Annan, Annan, Wootton & Burton, 2016). Often teachers and parents have been surprised when they have found out what their children know was more than they anticipated.

The trend here is to appreciate children's capability, rather than assume that there is a need to compensate for their apparent dependency (Annan, Annan, Wootton & Burton, 2015).

If you appreciate children's capabilities to do those things, you can support them in a way that works for them, doing tasks they can do with finely tuned assistance, and focusing on helping them toward their next step.

Image of a modern learning environment

Open-space buildings and fancy furniture are simply part of the window-dressing in future-focused learning environments.

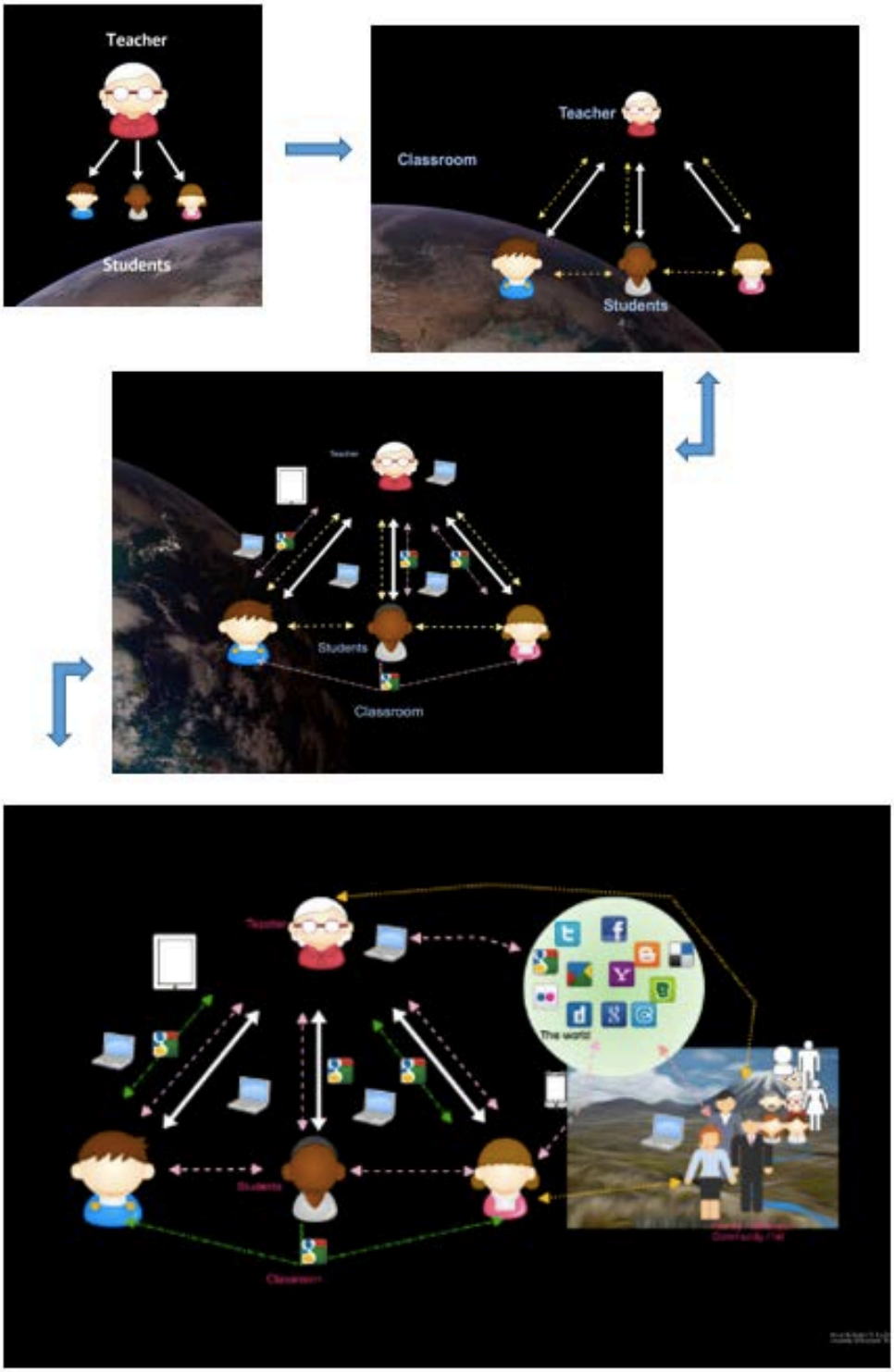
What matters most is the
interactive web
that contributes to
effective teaching and learning.

The series of images below depict the evolution of a modern learning environment.

Children continue to learn from and with the teacher. They also learn more with each other and through digital devices.

The final image shows many lateral links from the teacher and students out to families, the community, the environment, cyberspace and the wider world.

Evolution of a modern learning environment



(Annan and Burton, 2013)

The above images were designed to show the breadth of learning opportunities open to children and young adults in the modern world. We also thought it would be useful to show students the types of things that they could put into their learning maps.

We wondered if it was such a good idea to show students a model for the Infinity Maps.

Conscientiously compliant students may think our images were the ‘right’ ones and replicate them.

We also wondered what the series of images would look like if they were created by indigenous peoples and other cultural groups?

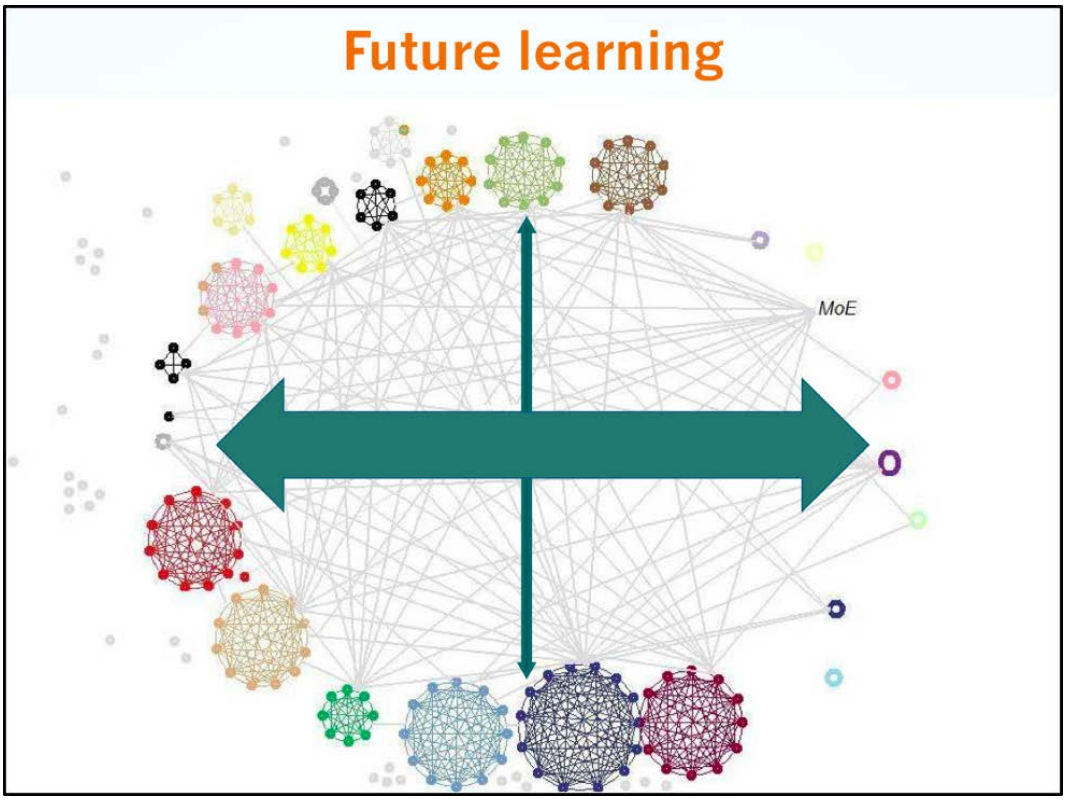
We concluded that all students’ images could look similar if we provided them with a model.

We decided that the student’s maps would be more personalized if they started with blank canvases and used their creativity to extract ideas from their minds.

Images of future-focused learning environments

What do images of future-focused learning look like? This question takes us into the unknown.
There is no certainty, only predictions.

One prediction is a fully networked learning environment.

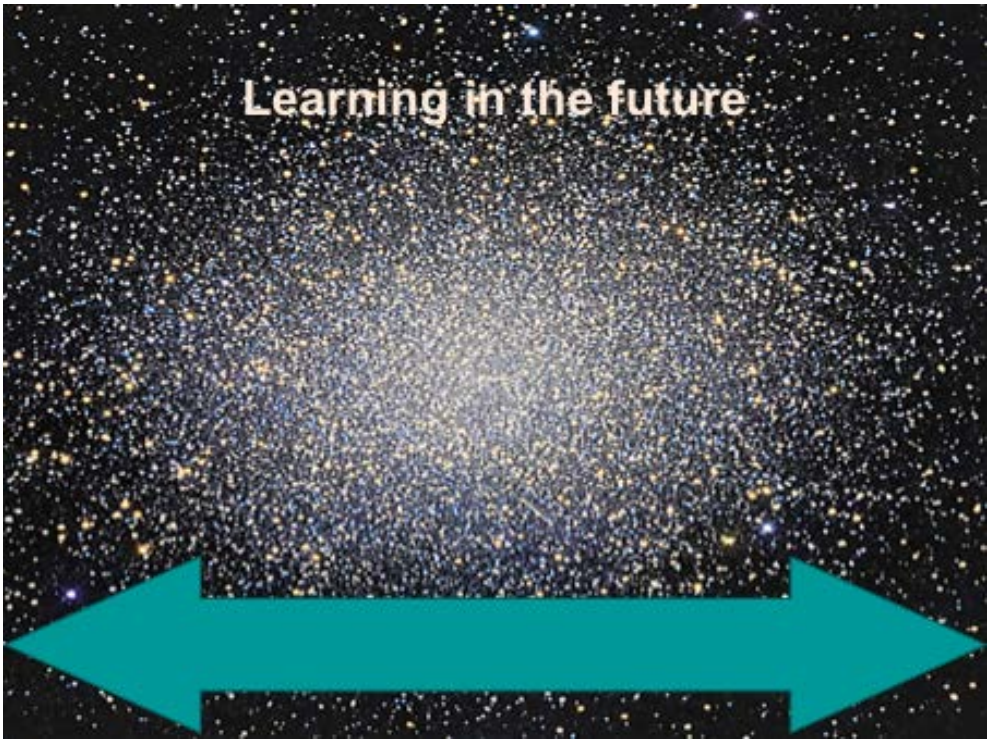


(Annan & Wootton, 2013,
adapted from, Eddie Reisch, http://www.vln.school.nz/

The green vertical arrow shows a minimal influence of hierarchies on learning. The horizontal arrow shows the emergence of lateral learning. In the past, hierarchies determined how people went about learning, living, doing business, coordinating events and governing communities, organizations and countries. Hierarchies are now having less influential on people. Technological advancements have seen an explosion of human interest in lateral learning via social media and networking. There are now signs that the lateral phenomenon is influencing the core of formal education.

The second image of future-focused learning below presents a more radical prediction that hierarchies no longer have any influence on learning. Lateral connectedness, represented by the strong green arrow, becomes the dominate feature of learning.

A second possibility of a future-focused learning environment.



(Annan & Wootton, 2013)

In this prediction, people will choose to connect with one another through both digital and non-digital knowledge nodes whenever and wherever for whatever they want or need. Imagine each star in the night sky representing a learning interest of a group of people. Then imagine connections forming between those interest groups. Some interest groups and connections will be hugely popular and new industries and economies will form around them. Others will be less popular but sustainable as niche-market interest groups. Others will struggle to attract sufficient interest to flourish.

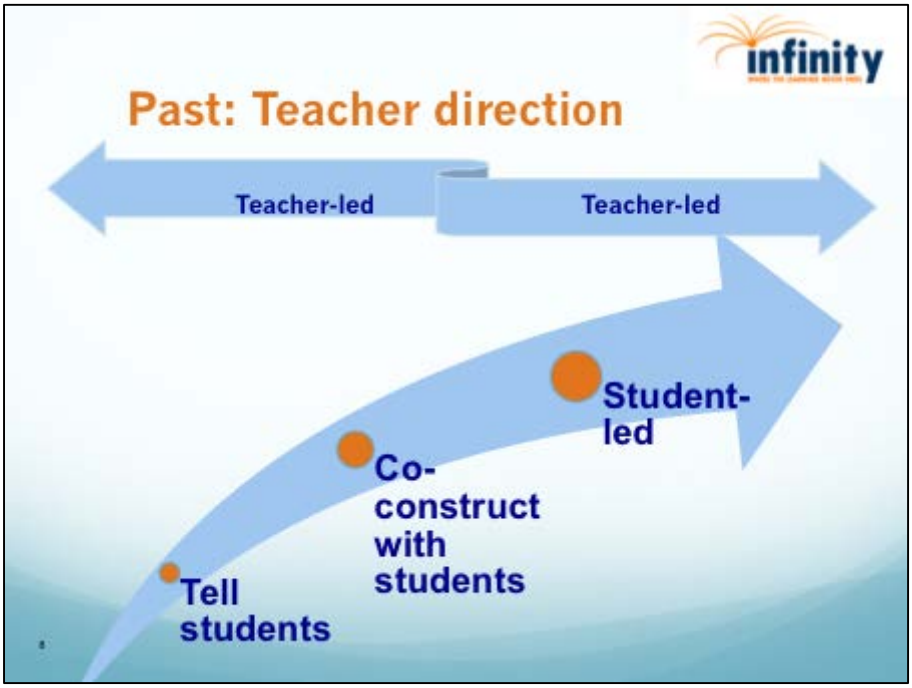
How will formal education adapt to interest-based learning?

Enjoy your discussion about these questions.

Shared locus of control

The frames below show shifts in the loci of control between teachers and students as education transforms from systems designed to support an industrial world to the future-focused learning environments being created today. These frames were designed to provoke discussion about the way learning is changing.

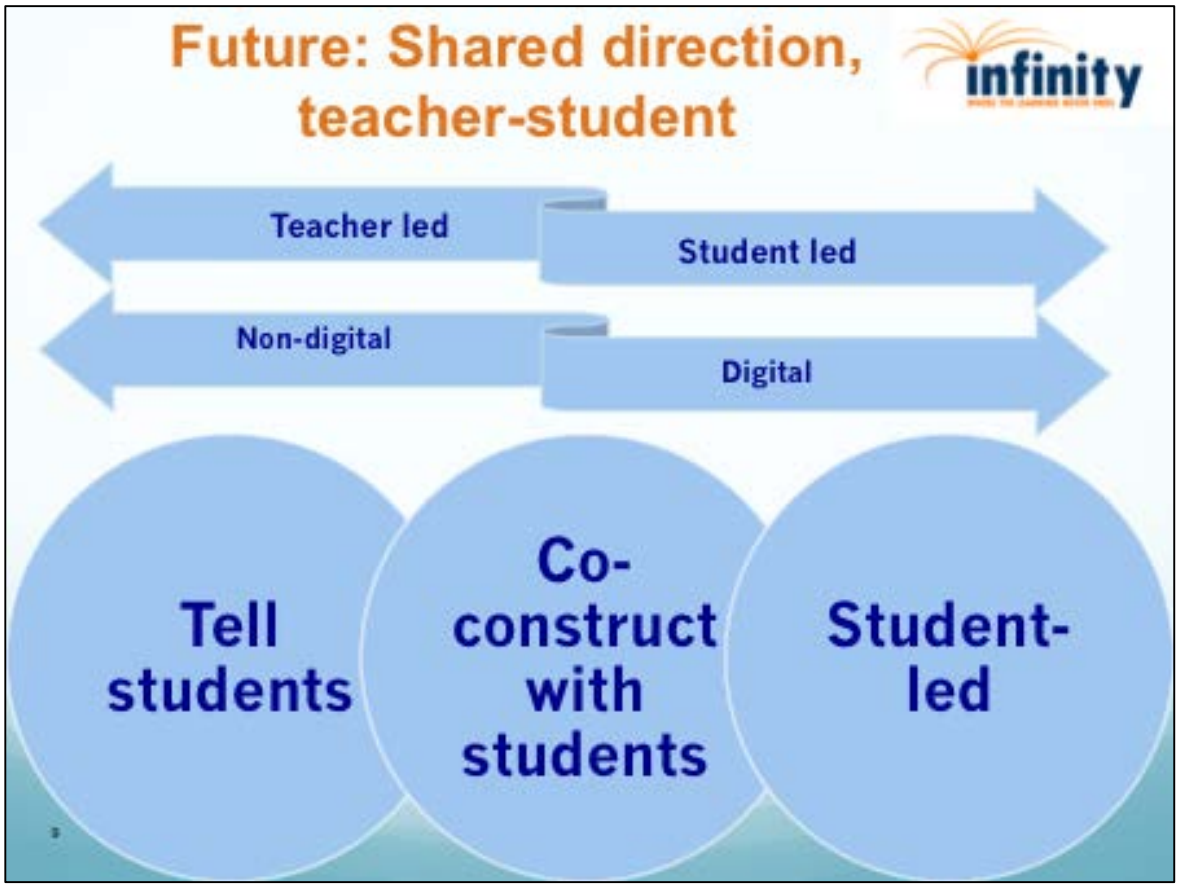
Past-focused locus of control for learning



Developmental theory in the last century linked cognitive learning to age and maturation (e.g. Piaget, 1952) and saw the learner as more active than the environment in determining learning. On the other hand, behavioral theories (e.g. Skinner, 1938), which had a huge impact on teaching and learning, placed responsibility for learning on the environment. Most often environmental direction was constructed by the teacher or parent. The behavioral perspective positioned the learner as passive. The interactive perspective encourages people to see teaching and learning as the shared responsibility of the active parties involved. It encourages teachers and parents to learn about the range of gradually lessening supports, or scaffolds, that students of all ages and abilities require in relation to the specific tasks at hand (e.g. Vygotsky, 1984; Wood, Bruner & Ross, 1976).

In future-focused learning environments, the locus of control is shared between the teachers and students.

Future-focused locus of control for learning



Teachers are making conscious decisions about more or less structure in their teaching practice and students know how to slide from driver to passenger of learning and vice versa. Cognitive capability is now conceptualized more broadly than in the past. It can be expressed in a multitude of ways but needs to be activated (Klemenčič, 2015). Students, young and old, recognize that they must be directed from their teachers and parents at times but will also welcome opportunities to co-construct and self or peer manage their learning. Teachers may negotiate these opportunities and trust students to follow their interests and passions. They may also trust students to set or negotiate their own standards to assess progress.

At professional workshop days, we have asked a considerable number of teachers and leaders to place themselves on a continuum from teacher control to shared teacher-student control.

Overwhelmingly, teaching professionals believe that their knowledge is ahead of their practice about shared control. Research into teacher control and student agency in Finland confirms that this is an international phenomenon (Rajala et al, 2016)

Most teachers and leaders have been firm in their view that routines and structure come before choice and interest, expressing a desire to step into the future in safe and conservative ways.

A challenge facing teaching professionals is that parts of the future in terms of wide choices and interest-based learning have already arrived. There is already a proliferation of learning and living opportunities that are challenging the idea of routines around a ‘core curriculum’.

How are you dealing with the control challenge?

Discuss trends in learning with your students

Once you have discussed global trends in learning with your colleagues, it is time to do the same with your children. Pitch your conversations to the age of your children. Your children need to know that the mapping activities are about them understanding global trends in learning and where they sit with those trends.

Your students will become aware of the bigger picture about learning and living at a young age. They will be better prepared to handle any type of learning challenges as they arise, whether they be small or large, or social, emotional or cognitive.

Sometimes an extraordinarily difficult challenge or a combination of challenges can cause children to plateau or go backwards in their learning. It is at those times that children need support from adults. They also need a sufficiently safe environment to activate themselves and take their share of responsibility to deal with the situation.

The Infinity Mapping approach manufactures a safe environment for children to learn how to manage their challenges. Inhibitions are set aside and the children talk openly about their challenges. Children typically ask for support from their teachers and parents, as they see those caring adults as joined at the hip.

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