Introduction

Inquiry learning in various forms has been perceived by many as the best way, if not only, to teach the social science, science and technology curriculums in our schools for a number of years. Environmental education, a concept beyond natural science that involves education about the environment, for the environment, in the environment, is also not a new programme in many NZ schools.

At Spotswood Primary we have been endeavouring to get up to speed with inquiry learning. As a whole staff we have visited a number of local schools (Opunake, Bell Block and Oakura Primaries) that were rightfully very proud of their inquiry programmes. Some staff attended a seminar presented by Island Bay School staff and our management team went to Island Bay to talk with principal Perry Rush and to see their model in operation. We then developed our own model using what we had perceived as best practice. ‘Classroom Connections ‘by Kath Murdoch became a key resource. Our staff developed a Rich Topics cycle of units of study that we thought were relevant to our student’s learning needs and would engage them. We’d taught for over a year using our inquiry model but were not satisfied that we’d ‘nailed it’.

Hence one strand of my sabbatical was to further investigate inquiry learning.

Alongside our efforts to develop inquiry learning we have also been trying to do more environmental education (enviro ed). While we already have an outdoor learning area in the middle of a developing natural forest with its own wetland, a propagation unit, a fantastic range of other environments relatively close at hand and have been doing some recycling, I didn’t feel that we have been making the most of available opportunities.

Investigating further enviro ed. opportunities, especially in authentic contexts, became the other strand of my sabbatical investigation.

Process

To begin my investigation I spent many hours scouring the internet for articles about inquiry learning & enviro ed. I visited numerous school web sites that endeavoured to explain their philosophies and programmes around inquiry and enviro ed. I re-read
Obviously the best source of practical knowledge is going to be gained from sharing thoughts with principals and teachers who are doing fantastic things for their students and seeing their programmes in action. As I was already aware of what was happening locally, I decided to visit schools further afield. I choose Tauranga as I had seen some exciting stuff when I visited some schools briefly with a New Plymouth principals group and had a principal colleague (Bill Ahern) who could put me in contact with local ‘experts’. I choose Whangarei / Far North as I was very keen, after seeing an item on Close Up and reading an article in Education Today, to visit Fraser Smith’s school at Turuturu and also had another strong professional link in Fraser’s brother Adrian.

I developed a set of questions that would form a framework for discussions.

• Please outline your school inquiry model & its development
• What, if any, changes have you made since your initial plan?
• Do you have a whole school, team or individual class plan?
• What are the ‘big ideas’ within your plan, how were they selected and how do they reflect your local curriculum?
• Do you manage to teach all of your social science, science & technology via inquiry learning or are there some elements that stand alone?
• Do you have a scheduled development of thinking skills built into your programme?
• Our NZ curriculum has a future focus. How do you cover such issues as sustainability, citizenship, globalisation & enterprise?
• How & what do you assess within your inquiry programme?
• Do you teach values deliberately within inquiries?
• What elements of sustainability / enviro. ed do you have within your school curriculum. Do you teach this within your inquiry cycle?
• How, as a leader, do you ensure that inquiries are student focussed with teachers operating as coaches and that there is co-construction of the inquiry?
• For learning to be truly embedded it needs to be used in another context or there needs to be an action that uses the new understanding. How does this happen within your programme?
• What is your next development in inquiry and / or enviro ed?
In the Tauranga area I visited Welcome Bay, Mangatapu, Omanu & St Marys schools.

I also spent 2 hours interviewing Chris. Brough, a Waikato University lecturer in integrated curriculum.

Around Whangarei I visited Onerahi, Whangarei Heads, Glenbervie & Manu schools and also spent time at Oturu School near Kaitaia.

**Key Findings:**

**Inquiry Learning.**

**BIG ideas will be local.** They need to meet what parents / caregivers and teachers see as important learning for a community’s learners. They need to include a focus on a regions history and natural environments.

**Inquiries must be around a context that is meaningful to the students,** preferably around a problem that they recognise as important. This gives a real purpose & relevance to the learning. Especially with younger students local contexts are going to have the greatest meaning. The 2 best inquiries I saw were around students wanting to keep chooks at school (Whangarei Heads Y 5-6) and a slippery deck on the way to the toilets (Omanu Primary Y 3). Both inquiries came from REAL issues to the students and, after a lot of work from them, resulted in REAL outcomes – there are some very contented and well-cared for chooks producing eggs and living in a pest free enclosure designed and built under supervision by students and a deck coated in grip impregnated paint.

**A true inquiry will conclude with an action.** The above 2 examples are shining examples. Actions need to be concrete and hopefully contribute to the greater good of the school or wider community ie a social action. (These fit well with the contributing KC in the NZC)

**Inquiries must be co-constructed with students.** The more input students have the greater the ownership, commitment and engagement in learning. Teachers must act as ‘coaches from the side’ and be prepared to let their students make mistakes – these will give them an opportunity to persevere and do a better job on their second attempt. Helping students make decisions and work in teams have to be main teaching priorities
There is no right model. The internet is awash with inquiry models. As long as your staff has had significant input into the development of a model, they will have ownership of it & make it work.

Assessment also needs to be co-constructed with students. They need to know what success will look like. It is relatively easy to self-assess if you have shared in developing the success criteria.

True inquiries can only start once students have a skill base. First they must know what a question is and how to ask one. They must be able to define and refine an issue. They must have some idea as to where they may be able to find a solution, who may be able to help them and how to contact and work with them. One school did no inquiry in term 1, just concentrating on developing skills, independence & thinking tools that were going to be used that year while another school didn’t teach using inquiry until students were in Y3.

Don’t get too locked into a prescriptive curriculum. Always make use of what the students are really interested in and will want to learn more about. Be prepared to drop everything planned and make use of spontaneous learning opportunities (teachable moments) eg something special being brought to school, a special visitor, an interesting event. These can all develop into fantastic inquiries. There’s nothing wrong with backwards planning! Be prepared to make use of teacher talents / interests. Conversely, don’t ‘make’ teachers work on a unit for an extended period that they have limited interest in. Their lack of interest / motivation will rub off on their students very quickly.

Inquiry learning works best in a child-centred classroom – one that takes into account not only student learning needs but also their learning wishes. Teachers need to focus on what decisions they can make WITH their students rather than FOR them.

A scheduled development of a small range of thinking skills eg de Bono’s Thinking Hats, needs to be infused through inquiries. The skills need to be taught in a meaningful context – not in isolation. A small range of thinking tools used regularly are going to be effective learning tools and will be embedded in students ‘tool kit’.

Be wary of whole school topics that go on for extended periods eg. a term. Very seldom is a 5 year old interested in the same things as an 11 year old and if they are, it is unlikely that they are going to sustain the same level of interest. A whole school theme that may have a number of different topics within it could very well work. Some schools work with a VERY broad theme eg change for a year

Not everything needs to be, or is best taught via inquiry.
Environmental Education.

A natural link to / source of inquiries. Enviro ed including growing plants is an amazing source of questions for and from children that can develop into inquiries. Why don’t kiwis live at school? Where’s the best place to plant tomatoes? What happens to paper that goes in the recycling bin? What’s a weed? Why are possums pests? What lives in that swamp? The list is endless. Children love learning about their environment and the more they learn, the more they will care for it.

A fantastic fit for our students. Learning about the environment, in the environment and for the environment are the 3 core strands of environmental education. Getting outside and doing stuff is at the core of Kiwi living. Conserving our environment is a key element in the cultures of our Maori & Pasifika learners and thankfully is becoming part of the wider Kiwi ethos as well. ALL students can experience success growing plants. ALL students can develop pride in caring for their environment IF they have contributed significantly to it – and this obviously transfers into the wider community. Having students working on environmental projects beyond their school alongside other community members is a great way to foster bonds / relationships that will have benefits for both sides.

School Gardens & Orchards were a feature of schools visited. While all were growing vegetables there were also herb gardens, sensory gardens full of plants with different feels and smells, ferneries and gardens with rare plants. Many schools had shade houses and propagation units so were growing plants from seeds and cuttings. ALL classes were involved. Produce was being used at school, taken home by children, given to elderly neighbours or others in need or sold in regular stalls.

There’s money to be made. Enviro ed programmes can be self-funded. As well as selling veges I saw schools selling plants and shrubs, worm juice, and eggs. Oturu School in the far north also sold olive oil, lip balm, honey, insect repellent and even a ‘kuti killer’. Students had been involved in the development and production of all products, had designed the packaging and were also working on marketing. Can learning be much more authentic than this?

Community Involvement. In all schools visited the enviro ed programmes were extensive and required more than just one committed teacher or principal to drive them. Most schools had a committee of staff, students and parents or interested community members (A successful committee will also ensure the sustainability of programmes within a school should 1 key driver leave). ‘Outsiders’ came into the school on a regular basis to work alongside students & teachers. Many schools had secured sponsorship from local businesses and service groups and were making use of periodic detainees as a labour source. Students & schools were connected to their communities.

Outdoor Art. Although not having a lot to do with conservation, large art pieces created by students specifically for display outdoors were a feature of all schools I
visited. I saw totem poles, carvings, murals in various media, mosaics, wind chimes, scare crows, flags and banners. Several schools were bringing in local artists to work with children on these – another great relationship. All of the outdoor art helped define the schools as ‘kid spaces’. None of the schools had high rates of vandalism – in fact one school said their vandalism rate had significantly decreased as more art was placed outside. Maybe the local vandals respected the efforts of their juniors.

While none of the above may be new to inquiry or enviro ed ‘experts,’ it has consolidated my thinking and it will help me drive our future programmes at Spotswood.

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