

## **FOCUS:**

### **A Thinking School**

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#### **Virginia Francis Plateau School**

My sabbatical study involved reading about the teaching of thinking and visiting schools that had the teaching of thinking skills at the core of all learning in the school.

Our school charter has thinking as a major focus for learning and yet despite an interest and some knowledge and experience about the use of higher level thinking skills, little was seen in classroom practice.

I decided to make this the focus of my sabbatical as I had identified within Plateau School, a need to add depth to all our programmes.

Previously I had observed and been aware of the fact that many of our students lacked independence to complete relatively easy tasks. They wanted constant reassurance that they were doing work in the right way. Our strategic learning goal for 2005 was to make our students more independent learners.

I made the assumption that one of the reasons our students lacked independence was because the questions and interactions with the teacher were largely low level closed questions and answers.

I gathered data in each classroom and found that in fact the questions asked by the teachers covered a range from closed to open and that the students themselves were fairly competent at asking open ended questions and giving full answers. There was also a fairly high level from most of the students in discussions and teachers managed to elicit answers from the more reluctant participants.

As one of the pathways to improve the quality of interactions between student and teacher, we had opted to be involved in ATOL during 2005 and 2006. The Assess to Learn programme focussed on quality feedback between student and teacher in order to improve learning.

In order to achieve the vision stated in our charter, we needed to explore successful practises from a range of sources for the introduction and development of a whole school process in Thinking.

Using my own knowledge of the thinking process, combined with the experiences and knowledge from successful schools who are on the path to a 'Thinking School' and the theories of respected educationalists, I have 'created' a possible pathway for Plateau School. The actual pathway will also be determined by those in our school who are involved in our journey to build a thinking school.

The schools that I was able to learn from, had all revisited and where needed, rewritten their charters in order to best express their vision for a thinking school.

Some of the essential beliefs about learning were:

- That students need to have well-developed thinking skills that would be useful in a rapidly changing technologically oriented world. We do not know the skills that will be needed for the future so the skills we do teach need to have wide ranging applications.
- That learning goals must be transparent to the learner so they know what is expected of them.
- There needs to be direct teaching of thinking skills by teachers who know how to teach thinking. We need to up-skill our teachers so that they are confident using thinking skills themselves, and can be positive role models in the application of thinking skills.
- That thinking skills are teachable and learnable and are particularly valid for learners with learning disabilities as well students with special gifts and talents.
- That students need to be independent thinkers so that they will not become addicted to being told 'what to think and do'. Freeman 1990
- That learning occurs 'best' when it is embedded in relevant practical experiences and students do best when they are actively involved in the learning.
- That learners need to make connections not only intellectually but also physically and emotionally with the topics they are studying. They need to be fully immersed in the learning process. The more meaning an experience has for a learner, the more that learner becomes emotionally involved in the experience.
- That students need knowledge and skills. The knowledge component of learning acts as a vehicle to capture the interest of the learner whilst at the same time embedding skills that will be used in a range of contexts in the future.
- That students learn best in a positive, stimulating and encouraging environment. In order for an optimum state of learning to occur, the mental, emotional and physical health of an individual must be assured. (Caine and Caine 1994)
- That learning doesn't necessarily occur in subject isolation but rather as a whole learning experience.
- That depth and quality must be achieved in our learning for it to be life-long.
- That in learning, students need to be taught skills that enable them to figure out what to do when they don't know what to do.
- That the learner needs time to consolidate and internalise information through the physical and mental processing of that information.
- That the learner needs to be clear about the learning intention. Focussed feedback between the student and the teacher helps to keep the learner on track and keeps them motivated.
- That we need assessment that more closely reflects the learning goals we have for students, that communicate the right messages to students about what is being valued, that align with current theories of instruction and describe what students can do rather than sort them out. (Diane Ronis. 1999). Assessment is a process for continuous improvement.

- We need to provide a range of working environments to maximise student participation such as; individual, cooperative and competitive.
- That students can be taught to assess their own levels of learning.
- That students can be taught intelligent learning behaviours such as: persistence, decreased impulsivity, empathetic listening, cooperative thinking, metacognition, checking for accuracy, drawing on past knowledge and applying it to new learning, question and problem posing, risk taking, a sense of humour, precision of language, use of all senses, ingenuity, and a sense of efficacy as a thinking. (Art Costa 1991)
- That thinking skills can utilise a range of tools to ensure participation and retention. Some of these are: Multiple Intelligences, De Bono's Thinking Hats and CoRT thinking programme, cooperative learning strategies, lateral thinking, thinking maps, mind maps, Bloom's taxonomy, and inquiry learning,
- That students can be taught cooperative and collaborative strategies to enhance learning such as: think, pair, share and triad, silent card shuffle, round robin, jigsaw, and hot potato. (Eric Frangenheim 1995)

There is a raft of information available about the teaching of thinking and how students learn best. The pathway I propose that we follow is one that utilises many of the ideas and theories that are available but one also that is right for our school and most importantly one that is manageable and understood by all those involved.

During the remainder of term four I intend sharing some of the theories about the embedding of thinking skills in the culture of our school in readiness for our integration of thinking into all areas of learning. We will also be writing our topic for term one and the integration of all curriculum areas under the topic theme. At this stage because we are still learning about integrating the curriculum and about the use of thinking skills to enhance learning, all staff will be involved in all aspects of the term one's planning. At this stage we intend using a model from Balwyn North School in Melbourne. We will develop our own plan using their model as a guide.

## **Plan for 2005**

### **Revisiting our vision.**

We need to revisit our vision to ensure that what we are doing is in alignment with our core beliefs. This will be mostly comprised of community meetings led by a facilitator. We will look at what we already have, and explore what is working well and what isn't working and why not. We will also share our vision to the community of a thinking school.

In looking ahead to the future, I am keen to use a model suggested by John Edwards where all community members present at meetings get to contribute their ideas and

feelings for the schools future directions/vision. Those ideas which are held to be of value by the majority will need to be explored as to what they mean for us as a community of thinkers.

It is important that we involve as many people as possible in determining our vision so that we all know our shared goals for the future. The community, who have a stake in the delivery of education at Plateau School, will need to be kept well informed as to our progress through our weekly newsletters, assemblies and celebrations.

Once our pathway for achieving our vision is clear, we will continue to seek community input as to our success. The refining and updating of our vision/charter will remain active during the five years of the introduction of a thinking school.

## **Big Picture**

If we believe certain truths for learning, then what will our curriculum look, smell, taste, and feel like? What is the big picture of the New Zealand curriculum? As a staff we will look the revised curriculum and explore what the Ministry of Education has come up with in its curriculum stock take. How does it fit in with our vision? How can we keep our special character and still cover what is prescribed? What is important for us and how much of what we want can be achieved in terms of our staffing, staff strengths and weaknesses, property and financial constraints? How can we best cater for the diversity of needs in our student population? How can we empower the community in which our school is based, to be involved at a deeper level with our students learning?

We need to ensure that every staff member is cognisant of what our vision means in terms of implementing a thinking curriculum. However, though we all need to be on the 'same train' in travelling toward our vision, we also need to have a healthy scepticism of 'faddish' ideas that will not necessarily improve learning outcomes for our students. We need to believe that in our school we have our future leaders and in quality teaching we contribute towards a quality future.

Therefore, the big picture for learning combined with what our school vision is, go together to create the 'map' for our journey.

## **Making it workable.**

We will be achieving our vision through the implementation of our integrated curriculum. This will be done through our topics in science, social studies, health and technology.

In our planning, we will bring together all the possible topics that we would have hoped to cover over a two-year period. Using these topics as a guide, we will come up with eight major ideas or topics to cover a two-year period – one for each term. Many of the previous smaller topics could easily be fitted within a major topic and could be one of the vehicles used to provide the context for the achievement of the goals. The inclusion of a range of contexts for learning ensures that each teacher has choice as to the learning contextual path they know would be most appropriate for their students in order to achieve the learning intention.

In deciding on our major foci, we would need to ensure that we provide a balance in curriculum coverage. In any one major topic, there could be many suitable contexts in which to work toward the major understandings.

For each major foci that we decide upon, we will write several key understandings that need to be achieved and we will also write two focus (fertile) questions that will be explored throughout the terms study.

## **Opening up our curriculum.**

What is required?

We need to get a big picture of each curriculum and how it differs at each level. We need a general look at what we believe is required of us from each curriculum and how it fits with our practical implementation.

We will write a generic shared rationale for each curriculum that we teach and in this way will also come to see ways in which we can integrate each curriculum area in a meaningful and authentic manner.

We will explore ways in which we can cover what is prescribed, what our learners needs are, what our vision/values are, what practical real experiences will be included because of our environment, how we can utilise all that our community has to offer and most importantly how can we make our learning intentions clear and our learning experiences enriched?

## **Hooking them in.**

For every learning goal we set, we need to be able to motivate our students to want to learn. There are many learning and thinking tools that we will utilise as teachers in order to ensure greater retention and application.

Teachers will need to, through staff development, become familiar and confident using a range of tools but the most important area of staff development will be focussed on teachers becoming familiar with the levels of Bloom's Taxonomy. One of our concerns with regard to our student's lack of independence can largely be overcome if we are familiar with the dimensions of Bloom's taxonomy and what implications it has for our teaching. Blooms is a strategy for teachers and students to consciously and systematically incorporate critical and creative thinking skills into the curriculum.

In using the strategies we can give our students a higher level of independence. We will work through the strategies and provide learning experiences that encourage higher order thinking skills. The levels in Bloom's taxonomy are structured from simple to complex. They are: knowledge, comprehension, application, analysis, synthesis, and evaluation. In revisiting Bloom's taxonomy, I became aware of the fact that whilst our teachers at Plateau, were covering the knowledge and comprehension aspects thoroughly, we were not allowing time for the higher order skills to be used, therefore our student were not as independent as they could have been.

Other areas of staff development will be learning about tools that encourage a high level of student contribution such as cooperative learning and ways of making contributions to class learning less threatening, such as hot potato and jigsaw.

Teachers will also become aware of a variety of thinking strategies that can be taught to ensure students learn to create new ideas and build on their present knowledge and skills. These include the six thinking hats, the CoRT skills, the use of mind maps and thinking maps, graphic organisers, flow charts, the inquiry learning approach, Y charts, swot analysis and decision making matrix.

Each teacher will need to decide on the most appropriate tools for their particular students. All teachers will be expected to use a range of learning and thinking tools.

One way in which the staff will become more familiar with learning tools is by each teaching staff member being given responsibility for a particular tool and then sharing this with the other staff. For each topic teachers will be expected to utilise the tools that will enhance the learning most effectively.

Part of our staff appraisal system will be linked to the way in which teachers carry out this responsibility.

## **Taking responsibility**

For each topic that is decided upon each term, teaching staff will be allocated two curriculum areas that will be their responsibility to 'write up' for the other teachers. This will be done in rotation so that no-one ends up with always having a curriculum area that has far more work than another. It will ensure that we are all familiar with each curriculum area and that we can build up our strengths and improve our weak areas. It also means a high degree of accountability to our peers. We must deliver but we also must help each other. This too will be linked to our appraisal system.

## **Does it work?**

We will explore ways in which we can assess learning in progress so that it can impact on the learning. We will learn about the use of rubrics for both student and teacher assessment. We will use peer assessment with in class observations and teacher reflective diaries. Assessment will be ongoing during a topic and based on the achievement of the learning intention.

At the end of a term, we will celebrate our success in learning with a variety of displays and performances which show our learning. We will involve as many people from the wider community as possible. Each class will be expected to show their learning in a variety of ways.

Student progress will be reported on both formally and informally.

As a result of our directions for learning, we will need to redo our report forms and rethink our meet the teacher discussions so that they have a component of student-selected goals. We will also be updating all of our teaching and learning procedural documents so that our delivery is in line with our vision.

## **Starting out**

Working together at the end of 2005 on the first topic, we will as stated previously, write up the fully integrated topic for term one 2006. All staff will contribute to each curriculum area and in this way we will have an expectation and model for what is expected in the future. We will develop a rubric which will cover the standard expected for each curriculum.

Over the Christmas break, staff will be expected to read the text 'The school as a home for the mind'. This is to give each teacher a background in the use of the Habits of Mind.

Each staff member will also be given a clear folder which will contain information about each aspect of developing a thinking school.

The folder will contain information about: Bloom's taxonomy and examples of how it can be integrated into class programmes, thinking maps and mind maps and a framework for planned introduction of these, De Bono's thinking hats outline, and the CoRT examples, examples of cooperative learning strategies, a summary of the inquiry approach, a brief outline of Gardiner's Multiple Intelligences, a copy of our present charter, partially written rational sheets for each curriculum area –to be completed for each area, and a sheet of expectations for what is expected for each aspect of the class programme, including the class environment. The folder will also include information about effective teaching for students who are gifted and or talented within a class programme.

## **Appraisal**

Our appraisal system will be directly linked to our charter goals, professional goals linked to teaching and learning, and personal classroom goals. We will use a rubric which we will design ourselves based on the required professional standards. Teachers will be expected to keep ongoing reflective professional diaries for a period of one year.

## **Reporting to the community**

This aspect of the new system has yet to be fully determined however, my proposal is a complete change to our reporting system in order to reflect the increased level of the students in the ongoing learning and assessment framework.

Each term, students will set meaningful goals for themselves, based on aspects of their own learning that needs to be improved. This will involve students, parents, and the teacher. Goals will be set early in the year and evaluated at the end of each term.

I propose that there will be two major written reports for parents during the year and four data only reports generated by information gained from specific testing. This second section of reports will be used to form the basis of each terms reports to the board and community. The data will also show added value at each level. Data will be collected on reading ages, spelling, written expression using Astle, basic facts and computation. My thanks to Ross Kennedy and his staff at College Street Normal School in Palmerston North for particular help in this area.

# **Other outcomes of my sabbatical**

## **House system**

We will be setting up a house system at our school. Each house will have two whanau groups within it. Once a week, each whanau group will meet for  $\frac{3}{4}$  of an hour to discuss issues of interest within the school and also to review the application of the focussed habit of mind for the week.

Each student will be allocated a house and whanau group when they are enrolled at the school. All members of each whanau are expected to care and look out for one another.

Each teacher will be allocated a specific whanau group and they will have that group for the time they are at the school. Each student will remain in their house for their time at the school. Houses and whanau groups will contain some people who are members of the same family.

This system is being set up to enhance the strong feeling of support that already exists at the school and also to deepen the sense of belonging to the school.

## **Library utilisation**

Our library is not being used at even a 50% level and because of the large amount of expenditure in this area it is vital that we make greater use of this asset.

My proposal is that each class gets to base themselves in the library for one day a fortnight. They make full use of the online, networked computers and they complete a range of literacy activities which enhance our student's attitudes to reading. Each class spends time getting to know what is available in our library and can spend time choosing their books for the week. They can invite guest readers from around the school and from outside the school. They can make the day a celebration of literacy.

In making use of the online computers, teachers will be available to help and also to ensure that the computers are being used appropriately. I am hoping that having this quality time in the library for each class will free up the librarian for more important tasks rather than just the overseeing of the issuing of books.

Special thanks to Ross Kennedy and the staff at College Street Normal School in Palmerston North and to Balwyn North School in Melbourne for their generosity and openness in sharing their pathway to developing a thinking school.

## **Useful references**

The school as a home for the mind. Art Costa  
Teach your child how to think. Edward de Bono  
Teachers make a difference. NZCER  
Reflections on classroom thinking strategies. Eric Frangenheim  
Student successes with thinking maps. David Hyerle  
Adventures in thinking. Joan Dalton  
Bloom's taxonomy.  
CoRT thinking and The six thinking hats. Edward de Bono  
Thinking about the teaching of thinking. D.H. Howie  
Brain compatible mathematics. Diane Ronis  
How to teach thinking skills. Jean Edwards