

Thinking Through VELs: A Toolbox of Power Thinking

Dawn Colcott and Bernadette Russell

Bentleigh West Primary School

Bentleigh (Melbourne), Victoria, Australia

and

Helen Skouteris

School of Psychology, Deakin University

Burwood (Melbourne), Victoria, Australia

For further information on this paper and opportunities for professional development contact Dawn Colcott, Educational consultant.

Email; colcott.dawn.e@edumail.vic.gov.au

Home: (03) 95795437 Mobile: 0415840726

Bernadette Russell, Bentleigh West Primary School, Bentleigh, Victoria, 3204

Email: russell.bernadette.m@edumail.vic.gov.au

Introduction

As primary school teachers with over 60 years cumulative experience between them, Dawn Colcott and Bernadette Russell were both excited and apprehensive about the introduction of the new Victorian Essential Learning Standards (VELS) in 2003. They soon realised that the Victorian Government had the foresight to respond to current research on children's learning and develop a brand new curriculum- a framework to equip students with the knowledge, skills and personal attributes that would be needed in their professional and personal lives in the future. Transfer of knowledge, not just student understanding, was emphasized. VELS was inspiring! It reinforced Dawn and Bernadette's belief that there is much more to teaching than content. Dawn and Bernadette had already discovered that when students are more self-aware, connected to and involved in their own learning they are more motivated to learn and more likely to transfer what they have learnt across disciplines and grade levels. VELS provided the curriculum to support this type of teaching and learning – that is, teaching that does not focus simply on the content, but rather on fostering the student's relationship to the content and teaching that inspires and challenges students to continue the journey of life-long learning. The Thinking Processes domain of Interdisciplinary Learning was also innovative. For the first time teachers were required to teach thinking!

Writing this paper specifically for primary school teachers, Dawn and Bernadette provide a narrative below of how they fostered a culture of thinking in their classrooms. They have designed and implemented a "Tool Box", inspired by educational theories (Habits of Mind, Gardner's Multiple Intelligences and Bloom's Taxonomy), as well as the VisibleThinking¹ approach to teaching and learning. This "Tool Box" equips students with

¹ Perkins, D. N. (2003). *Making thinking visible*. Available online at: <http://www.newhorizons.org/strategies/thinking/perkins.htm>

the thinking tools to make their thinking visible to themselves, their peers and their teachers.

Fostering a Culture of Thinking

As teachers of young children we are all aware of the qualities that they bring with them into the classroom environment. Young children are beings full of wonder, curiosity and spontaneity, combined with their own unique individuality. With each child comes a unique brain. We know that children are capable of flexible and complex thought-transference; this natural phenomenon and the enthusiasm for learning that comes with it is sometimes stifled when children begin formal school rather than further encouraged and stimulated. It is our responsibility, as leaders of their educational experience, to “feed” this enthusiasm for learning by challenging children to think for themselves in their own way and at their own level of understanding.

Our classrooms are safe places where children think, talk, listen and build the confidence in themselves to try out new ideas, work co-operatively with others and respect one another’s opinions. By encouraging children to think about their thinking and providing them with words to describe their thinking processes, we help them to understand the power of their own minds. Perhaps more importantly, we allow children to make their thinking visible to their peers and teachers. The Visible Thinking team at Harvard University’s Project Zero² contend that teachers can track students’ understandings much more efficiently when their students’ thinking is visible; teachers can follow their students’ thought processes and discover prior knowledge, level of understanding and can uncover misconceptions. All this leads to more effective teaching and learning so we were keen to explore strategies in our classrooms to make students mindful of themselves as learners and thinkers. Why was this important?

² <http://www.pz.harvard.edu/Research/VisThink.htm>

What does the future hold?

VELS require teachers to equip students with the knowledge and skills needed to meet the challenges of the future. This is an immense challenge – the jobs that our Prep children will be doing in 20 years time may not even exist today!! It is our challenge to equip students for a future that is still on the “drawing board” so to speak. Bill Gates stated: “We used tools in the past to leverage our muscles. We use tools today to leverage our minds.” This quote and the challenge set by VELS inspired us to think creatively about our teaching methods. We knew we had the “climate for thinking” in our classrooms but did we have the tools?

In the classroom, teachers and students must co-create a positive learning environment that is productive and challenging for all. Moreover, teachers must create a collaborative relationship with their students so that they are actively involving children in the problem solving process and guiding and helping them whilst also encouraging independence. Students are encouraged to take control of their learning by building on their prior knowledge, setting their own goals, questioning, thinking about their thinking (metacognition) and self-reflecting on their own learning. The “climate for thinking” is set. We will now take you through our journey of creating the tools needed to foster this thinking.

Filing, ordering and retrieving information

Initially we introduced the filing cabinet analogy to our students. It is a simple example of how we learn something and then file it away in the filing cabinet in our brains for future use. With the use of this analogy, young students begin to understand that knowledge, skills and strategies are never lost and always retrievable. They build additional information in the files, connect it to other memory bytes and use the original or adapted information in different situations.



We soon realised though that the filing cabinet analogy was not enough. We felt that something more concrete and visible was needed. We proposed that children's thinking may be facilitated by making the tools to writing/mathematics visible to them so they can use them to reflect on what they have written and what revisions need to be made. This is when we designed the "Toolbox" pedagogy. The Toolbox is a collection of skills/tools to be used by children at all times when problem solving and creative thinking is required. Initially we were working on implicit instruction for transference of the basic skills of handwriting, letter/sound knowledge, and number development from Prep to Grade 1. Then the Toolbox became more valuable as we filled it with a range of multi-functional tools that encourage independent learning and thought.

The tools are a visual prompt of prior knowledge and learning. They are printed on cards and kept in a plastic folder. Students in our classes have their own individual Toolboxes in a plastic folder in their lockers. They add tools/skills when introduced and retrieve them when they are needed. When working with young children the tools need to be: -

- ❖ Visual
- ❖ Tactile
- ❖ Simple, descriptive symbols that children respond to.
- ❖ Reflected on every day as part of class discussions.

- ❖ Easily accessible.
- ❖ Valued by each child.

We have also created a large class set of tools in a large plastic toolbox that is on display and referred to regularly by us as teacher and by the students themselves (see Figure 1). We preface the discussion of any classroom task with the question: “What tools are we using today?” and even Prep children are quickly able to identify the key skills and understandings needed, such as “pencil grip” and “sitting letters on the line” for writing, and “number patterns” and “two odd numbers make an even number” for mathematics (see Figure 2).



Figure 1. The class Toolbox used by the teacher to demonstrate the contents to children.



Figure 2. A demonstration of tools identified by children in a preparatory class.

Some tools are generic across grade levels, e.g., Habits of Mind, while others are generated from the different classroom environments. Below is an example of what a Toolbox might include for an individual Prep child:

VALUES

School values

I-Care rules (Peace-Making Program)

Class Rules

Habits of Mind

ACADEMIC

Letters of the alphabet

Numerals

4 processes

Mathematical symbols

Punctuation and Grammar

Handwriting- formation of letters, directionality etc

Fine and gross motor techniques

THINKING TOOLS

Graphic organisers

Thinker's keys

Debono's hats

Gardner- discovering their learning style

Questioning

Goal Setting- template on back of toolbox

ENVIRONMENTAL TOOLS

Observations and reflections

Re-use, Reduce, Recycle

Sustainability

INDIVIDUAL GOAL SETTING

Goal setting is one of the major tools in helping children to develop reflective thought patterns on what they know and what they want to find out about.

Individual students set their own goals by reflecting on a specific learning process or strategy and discussing it with the teacher. The goal is identified by the child as something that they need to improve upon or a specific area that they have a passion about and want to explore. Their goals are then transferred to the sheet

on the outside of their toolboxes. The goal is coloured in and signed off when achieved through a self-reflective process. These goals may also be a part of the student's Individual Learning Plan developed by the teacher.



EXAMPLES OF PREP GOALS

- ❖ Learning all initial sounds
- ❖ Automatic response of number facts
- ❖ Putting hand up before speaking (managing impulsivity)
- ❖ Re-read and edit own work (Perseverance)
- ❖ Listen to others when they are speaking
- ❖ Work in groups with others (Interpersonal development)

HOW CAN THIS HELP YOU AS A TEACHER?

As teachers we appreciate how full the day is. Time is of the essence. This type of classroom culture enables you to combine VELS outcomes, PoLT and assessment strategies in a more efficient manner. Students are encouraged and supported to become independent learners, mindful of themselves as individuals, group members and part of a community. By providing an environment rich in challenges, we are producing self-motivated students who set their own goals and reflect on their own achievements. For example: PoLT 2.1 Encourage students to set goals for their learning, to self-monitor their progress and provide evidence when they've achieved goals.

The Toolbox is only one part of our classroom culture of thinking. Thinking routines (such as "Think-Pair-Share" and use of Brain Maps/Mind Maps) are also critical to fostering a mindful classroom, as is a School culture of performance and development which we are very fortunate to have at Bentleigh West Primary School. We are available to discuss how you too can set up and manage the Toolbox and the strategies needed to achieve a positive learning environment; we can also provide examples of lesson plans. Please contact us (details on first page). We look forward to speaking with you!

Other Useful References

Buzan, T. & Buzan, B. (1993). *The mind map book: How to use radiant thinking to maximize your brain's untapped potential*. London: BBC Books.

Costa, A, & Kallick, B. (2000). *Habits of Mind – A Developmental Series*, Association for Supervision and Curriculum development. Hawker Brownlow.