



TEACHING AND LEARNING – WHAT REALLY MATTERS

Research tells us that most of what we do in schools contributes to the achievement outcomes of students. However the important thing for us as educators and parents is to understand which factors have the most positive influence, so that we can modify what we do to ensure that all students achieve optimal success at school and beyond.

In this article we want to share with you some insights from a number of writers and researchers who have given considerable thought to this issue and can provide us with new perspectives.

‘Future Proofing’ Education

A recent address by **Professor Martin Westwell** (2011), of Flinders University, spoke of the need for “future proofing” our children. He discussed the need to think beyond measurements of literacy and numeracy performance when estimating children’s success in education. Particularly in our current rapidly changing times, we need to develop an education system that also examines the key ingredients that promote effective life-long learning. Westwell reminds us of the importance of the child’s ability to ‘stop and think’ or inhibit impulses. As teachers we need to encourage children to respond to a situation with original thought rather than as a reaction out of habit.

Another cognitive foundation for effective learning is the ability to think with flexibility. Children should be encouraged to see one thing in relation to others and ‘think outside the square’ so that new knowledge can be connected to what is already known, and also applied to new situations. Westwell also tells us, that how children view themselves as learners, is a major influence on their learning outcomes. Students who are taught in a climate of performance-based judgment may have a restricted view of themselves, as “this is how smart I am”. A similar viewpoint may develop from family or community expectation, placing a sometimes unspoken limit on their expected progress in school and beyond. For example, “Hardly anyone from my suburb goes to University.” Or “My Dad was no good at school either.”

Professor Westwell examined different students’ approach to learning new tasks. Effective learners, when faced with unfamiliar or unknown tasks, saw themselves as learners and embarked on strategies to find out and respond to the challenge, whereas those students with a fixed attitude about how well or poorly they could ‘perform’, withdrew from the task, seemingly defeated before they began.

Westwell went on to elaborate about the differing educational outcomes for these groups of students. There are significant implications for us as teachers and for the ‘education system’ as a whole to address these issues.

Visible Learning

Professor John Hattie, a New Zealand educational researcher, and currently Director of the Melbourne Education Research Institute, has for many years examined the influences on children's education. After 15 years of research, Hattie published his findings in the book "Visible Learning" (2008), which brings together the results of 50,000 previous studies, involving over 200 million students and ranks 138 aspects of schooling that influence educational outcomes. Hattie's work highlights the power of teachers, in creating the learning climate of the classroom that they establish, through their trust of the students and the feedback they provide for them. Surprisingly some factors, previously regarded as significant by others, such as class size or repeating a grade, were found to have relatively little influence on learning outcomes.

Hattie's meta-analysis of the educational research studies revealed the factors that have the most positive influence on student outcomes and he summarised the common themes in terms of 'visible' learning. Visible teaching and visible learning will occur when teachers SEE learning through the eyes of their students (what is happening, what students know, what knowledge or skills are needed for the task, how they can challenge the students and what feedback is needed) and when students SEE teaching as the key to their ongoing success and begin to take responsibility for their own learning.

In an interview in 2008 (Australian Government Summer School for Teachers of Mathematics) Hattie emphasized that effective teaching requires deliberate intervention to ensure that cognitive changes occur in the students. He encouraged teachers to see themselves as activators rather than facilitators, saying, "Teaching is a very deliberate intrusive kind of action." Hattie challenges teachers to question their style of teaching and to monitor its effectiveness. He also appeals to teachers to talk with each other about their students and the visible teaching and learning taking place in their classrooms. Teachers should be constantly doing their own evaluations asking, 'What do the students know now? How can I challenge them? What do they know later?' It is a waste of time to teach things that the students already know.

"Watering Up" the Curriculum

Ed Ellis is Professor of Special Education at the University of Alabama. He has researched and written extensively about the need to cater for all students in the classroom, including those who struggle. It is in fact those struggling students who are even more in need of the very best teaching attitudes, strategies and techniques that allow them to become successful learners. Ellis talks of the need to 'water up' the curriculum in order to help struggling adolescents rather than making classroom and curriculum accommodations that diminish opportunities for students to learn. Ellis describes both **knowledge goals** and **affective goals** in teaching. For example: Teachers need to promote students' deeper understanding of a topic or concept rather than superficial facts and encourage them to make links to real world situations (knowledge goals). Students should actively participate in learning tasks, be confident to take risks, and to reflect on what and how they are learning (affective goals). Teachers should foster the development of cognitive skills in their students as they teach the content of the curriculum, so that their students can learn how to "be smart". Ellis suggests explicit teaching of 'habits of the mind' such as resisting impulsiveness or persisting in tough times, as well as specific learning strategies such as that employed for taking a written test. In reality, knowledge and affective goals are "integrative and reciprocally influence each other" (Ellis 2002).

Teachers and Students

We can summarize some of what these three researchers have discussed.

Teachers need to;

- believe that every child can learn.
- avoid categorizing children, thereby placing limits on their educational potential.
- have clear learning intentions and set appropriately challenging goals.
- know and present the core ideas of the topic.
- prioritize what to teach, balancing the deep and constructed 'big picture' learning, with the more superficial learning of facts.
- set meaningful, interesting and purposeful tasks.
- create a learning environment that accepts and even encourages errors.
- give feedback that has specific reference to the task, the process and the students' efforts and self-regulation – not just that the work presented was good or not.
- know their students and their progress and use questions strategically to further challenge and teach them.
- demonstrate learning strategies - modeling both the action and underlying thinking
- scaffold the task or thinking strategy with the students. "I do it, We all do it, You all do it (group), You do it (individual)." (see Newsletter 35. The Teacher's Toolbag).
- give more opportunities for students to elaborate information they learn. In other words, re-work or translate it in some way so that what is new can be connected to what is already known and understood.
- foster a classroom atmosphere based on acceptance, respect and the right to learn.
- allow time for students to respond and contribute and allow multiple contributors

In turn, we want our **students** to be:

- motivated and positive, with a healthy self-esteem.
- more concerned with a love of learning than the performance based assessment of how much they know.
- aware of their knowledge and skills or lack of them (their strengths and weaknesses).
- able to use 'self-talk' and 'self questioning' to guide their thinking and learning
- self-regulating. Students' learning is guided by their ability to think about thinking and reflect on what and how they are learning (metacognition).
- strategic. Students plan their action, monitor their efforts and evaluate their progress in reaching a goal.
- 'self-teaching'. Successful learning reinforces learning and motivates students to learn more, so they become their own 'teachers'. This allows them to be self-reliant.

Some tools to assist teaching and learning

- Encourage students to elaborate knowledge and understandings in a variety of ways. For example, summarizing, posing questions, drawing diagrams, prioritizing, comparing and contrasting.
- Use Graphic organizers to show the relationships between ideas and to clarify knowledge. For example KWL – what I **K**now, what I **W**ant to know, what I have **L**earned.

- Make students aware of the main ways information is presented - list, hierarchy, compare/contrast.
- Model and encourage students to use 'Think A loud' technique as they listen to or read information.
- Provide opportunities for students to clarify and organize their ideas by talking before they write.
- Ensure that students have the words to describe the structure of the language. For example words, sounds, syllables, short vowels, sentence (metalinguistics).
- Heighten students' awareness of the purpose, organization and typical language forms used in different texts – both spoken and written. For example in giving an instruction, or telling a story.
- Discuss the specific language markers that cue us as to the type of genre e.g. the words 'consequently', and 'on the other hand' may suggest an argument.
- Highlight cognitive verbs such as *think, know, wonder, decide, remember*, and encourage students to learn to recognize and use them in spoken and written language.
- Teach the key vocabulary words related to topics, that are essential to the understanding of the important concepts of that topic.
- Provide opportunities for students to practise using 'linguistic frames' to express information and knowledge.

To make a _____ you need the following ingredients.

The first step is to _____

I agree with people who say _____ because _____

Both the _____ and the _____ are _____ (classification).

There are three main differences between a snake and a lizard and these are _____

An example of a resource highlighting such linguistic frames is Language Spinners (Love and Reilly 2004). Teachers can use Language Spinners to stimulate students to explore and express their opinions on a book, characters or topics of their choice. This flexible resource with interchangeable discs provides a framework to support students in stating their knowledge, reflecting on a topic or giving their opinion. See ways to use this resource at www.pelican-talk.com

References and resources:

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This article was originally written and published by Elizabeth Love and Sue Reilly in October 2011. It was re-formatted with slight changes by Lucia Smith in September 2012.

