

LEARNING TO LEARN IN THE 21st CENTURY

The new millennium is now upon us signifying a milestone along the timeline of history. For those involved in education the year 2000 provided an opportunity to reflect on what has been happening in schools and to look forward to see how students can be best prepared for the world they will face in the future.

This future however is far from certain. The United States Bureau of Labour estimates that 70% of all jobs now require some minimal understanding of how to operate a computer. By the year 2010 all jobs will require significant computer skills and over 80% of those jobs have not even been created yet (Jackson, 1999).

Have schools modified their programmes in response to this information? Little has changed in some classrooms, where teachers still work in a manner similar to that which was the norm at the beginning of this century. Students are seen as empty vessels coming to school ready to be topped up with knowledge each day. This knowledge is poured in with the expectation it will be regurgitated at some later date.

“The problem with education isn’t that schools aren’t what they used to be, the problem is that schools are what they used to be. Schools have not gotten worse, they have simply not changed for the better.” (Gerstner, et al 1994).

We cannot know for sure what knowledge our students will need to best prepare them for the future. What we do know however is that they will need to become life-long learners, able to adapt to the future changes which will inevitably have an impact on their lives. Teaching students *how* to learn is now more important than teaching them *what* to learn. Students should be developing thinking processes critical for the information age, which enable them to know

how to access the knowledge required, and more importantly, *how to evaluate* the veracity of the source and the knowledge itself.

Many teachers would like to change the way they work with students and acknowledge that a different approach to teaching is now vital. How might these changes be made? How can teachers allow students to take greater responsibility for their own learning without the teacher sensing a loss of control? How can curriculum requirements be covered where students are making decisions regarding what to learn? These are very real issues that need to be addressed.

Where a clear and focused vision for student learning has been collaboratively developed, where this is well communicated and understood by all, and where structures and strategies are in place which encourage teachers and students to work towards achieving the vision, positive change can be accomplished.

A feature of Bucklands Beach Intermediate School's vision for the 21st century is in part, exemplified through the notion of *Learning to Learn*. The way in which this concept is translated into reality is illustrated through the *Learning to Learn Portfolio Model*. (Fig 1). Each component of the model represents a significant contribution to the vision and has evolved over approximately 10 years of commitment and experimentation by teachers, students and parents.

Much has been done at Bucklands Beach Intermediate in an effort to have students take increasing responsibility for their own learning. It is recognised that if our students are to be successful in the future they must be given the skills to learn how to learn. We want them to understand that learning is something they do, it is not something that is done to them. Strategies are in place which increasingly lead students towards becoming self-directed, independent learners.

A student portfolio is the vehicle used to guide these changes. The portfolio provides structures which scaffold students towards increased responsibility for their own learning while also providing structures to assist teachers make the paradigm shift from that of director to facilitator of learning. These structures support teachers in making the paradigm shift at a pace that

minimises concerns over losing control. The portfolio is the catalyst for this change process to occur.

Portfolios are not new. They have been around for many years in other walks of life. Artists and photographers have regularly kept folders to show off their best work. Throughout their careers journalists are likely to have kept clippings to illustrate the depth of their writing, to record roles fulfilled and awards presented.

A well-maintained portfolio can paint a detailed picture and present information in a form that is difficult, if not impossible, to present in any other way. It can show an individual's current stage of development. It can show progress achieved over time.

So how can a portfolio be used to support student learning in schools?

When students maintain portfolios of their work they learn to assess their progress as learners and teachers gain new views of their accomplishments as learners. (Wolf, 1989)

The process of portfolio development at Bucklands Beach Intermediate School began with students setting goals and assessing their own progress. Samples of work showing growth over time were included. The *Learning to Learn Portfolio* Model grew from these simple beginnings with the portfolio format changing over time as we gained greater knowledge and understandings of the processes involved and outcomes desired.

The portfolio now serves several clearly defined purposes. It is used as a vehicle to assist with the development of metacognitive skills, has an important role to play within the school's assessment programme, and provides structures that encourage stronger links between the school and the home.

The Learning to Learn model illustrates how the various components of the portfolio interlink and contribute towards the primary goal, the development of self-directed, independent learners.

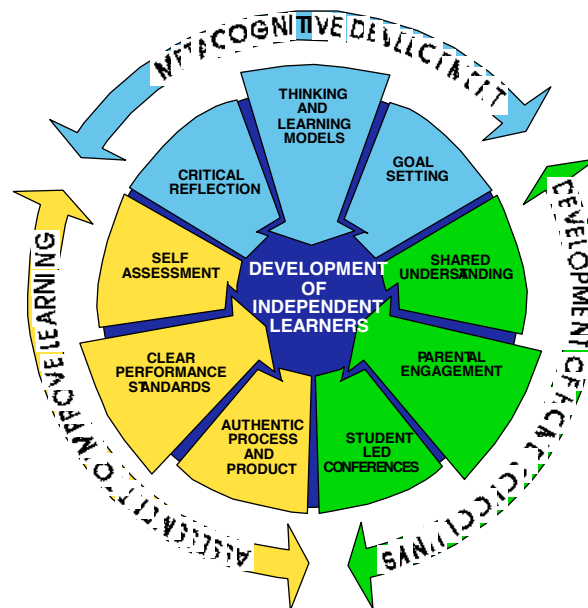


Figure 1

LEARNING TO LEARN PORTFOLIO MODEL

Ian Fox

Metacognitive Development:

One theme in the model focuses on the students' metacognitive development. If students are to develop as independent learners they must reflect on their own progress and look at what they can learn from what they have accomplished, for reflection is the key to metacognition. Reflection is being able to stand back, to think about what has been done well, to identify difficulties, and to focus on areas for improvement.

Metacognition is our ability to know what we know and what we don't know. It is our ability to plan a strategy for producing what information is needed, to be conscious of our own steps and strategies during the act of problem solving, and to reflect on and evaluate the productiveness of our own thinking. Thinking about thinking begets more thinking. (Costa, 1991)

The portfolio provides a forum for reflective writing to take place within the classroom programme. Through their writing students respond to key questions such as:

- “What have you done well?”
- “What difficulties did you have?”
- “What could you do next time to improve?”

Gradually these starter questions are removed with students asked to simply reflect on their work and to plan strategies to enable them to do even better next time. When encouraged to become critically reflective of their own performance students are well on the way to becoming self-directed independent learners.

Reflection encourages students to think about their own thinking. It develops their ability to know *how to* think, and not simply *what* to think. Where students are able to reflect on their current strengths and weaknesses, they are in a strong position to set their own future learning goals.

Where students set goals, individuals were shown to have made impressive gains in terms of academic achievement, plus on measures used, these same students also gained higher placings in class. Research also found that where goal setting was a normal part of the programme attendance patterns improved. Students were able to see greater relevance in class programmes and were more highly motivated to attend classes. They spent less time away from school. Truancy numbers were down. (Atman, 1988)

In spite of the significance of this information there is little evidence to suggest the practice of student goal setting is widespread. Students are seldom given strategies that encourage them to strive towards achieving goals they have set for themselves.

Kay Atman concluded that having students set their own goals, and planning steps towards achieving these, is one way of assisting ‘at risk’ students. Goal setting has a profound effect on students’ progress towards independent learning.

The portfolio provides a format for goal setting to be taught. Frameworks are developed which encourage students to set learning goals, to strive towards the successful accomplishment of

these goals, and to feel good about being successful. Successes should be celebrated. Self-esteem is enhanced when students are successful. Success leads to further success.

To assist further with the development of metacognitive skills students can be introduced to a range of models for thinking and learning. Teachers cannot expect students to have a detailed knowledge of the processes and principles of learning which may seem very logical and simple to adults. These are skills that need fostering. They are skills that can be actively taught and practised.

Many well-recognised models are widely available. The *Six Thinking Hats* and *CoRT* thinking models of Edward de Bono, to name but two, assist greatly with the enhancement of thinking abilities and problem-solving skills. The direct teaching of thinking can do much to build metacognitive skills. Other models introduced can assist with decision-making and work planning skills.

Assessment to Improve Learning:

Another theme of the Learning to Learn model focuses on using assessment to improve learning outcomes for students. Regrettably, too often assessment and evaluation tasks are seen as simply mark gathering exercises, a time to grade students. Summative assessment is important and a key responsibility for all teachers. However so much more could be gained where assessment is used not just to gather marks but also to find out what has been achieved by the student and what is needed for improved learning. Formative assessment provides an opportunity for the teacher to learn more about the learner. It also provides an ideal opportunity for learners to learn more about their own progress.

Much teacher feedback is unspecific and therefore useless to the learner. When a teacher marks a piece of work, corrects errors and writes a comment such as, *good work - well done*, what does this mean for the student? What do students understand the comment to mean? Do they know what *good work* is? What is it about this particular piece of work which makes it *good*? What was done this time which makes it *better* than the last effort? Is it because *more* was written? Is it because the work was presented more *neatly*? What was *done right*? How could the same

response from the teacher be obtained again? What is the magic formula for success known by the teacher?

Teacher marking and assessment should have meaning and relevance to the learner. It should lead students to a clearer understanding of how good work can be achieved and what is able to be done in future to strive towards the goal of excellence.

Wherever possible, learning tasks set should require students to demonstrate an understanding of concepts in real life contexts. Improved learning results where clear performance standards are given and when learning and assessment are seen as relevant. Authentic learning should be the teacher's goal. In this way students gain an understanding that what is being learned at school has relevance to their everyday lives. Learning is not something confined solely to schools. It is something which will help them solve many of the problems they face in their every day lives, in a range of contexts.

When students know assessment criteria prior to commencing work, there is a much greater likelihood that the learning goals will be achieved. Students can assess their own work against stated standards. Clear performance standards give students a goal towards which they should strive. They know what is required to achieve a top mark or grade. They *know* just what “*good work*” is!

Students should be encouraged to help set these standards through working with teachers to determine measurement criteria. Where these standards are accepted, and applied, students develop an increasing understanding of quality measures together with requirements necessary for standards to be met. They know clearly the reasons for marks or grades given and readily see where future improvements are needed.

Authentic learning and assessment can help break the cycle where, for many, failure is the expectation. Students become more highly motivated to succeed. They see purpose in their schooling. They see the application of what is happening in school to their everyday lives. The portfolio can support this process through clearly recorded learning objectives, authentic learning tasks and clear measurement standards.

Development of Home-School Links:

The remaining theme of the Learning to Learn model illustrates how the portfolio contributes to closer links between school and home.

With the portfolio going home on a regular basis, parents have opportunities to discuss progress with their children and give support and encouragement. Parents become more informed as to what has been accomplished in class and the standards achieved. They gain a much clearer understanding as to why specific marks or grades have been allocated and the progress needed for future improvements. Clearer and more focused lines of communication are established with the whole assessment process becoming more open. Progress achieved over time is clearly evident. With the portfolio much of the mystery surrounding assessment is removed and the confusion which often exists between parental expectations and student achievement is avoided.

A key strategy in the development of quality home-school links is the conference held between the teacher, parent and student. This conference focuses on progress to date and the setting of future goals. Productive conferences result from a high level of student preparation and participation. Students require support as they gather material for presentation to illustrate achievement and growth. Much of this material would be contained in the portfolio. It is the evidence of learning within the portfolio that provides a purposeful focus for the conference.

Where student-led conferences are held, students become responsible for leading the discussion and providing evidence of progress and achievement. They are charged with the task of providing a range of work to illustrate the progress they have made. Teachers and parents raise questions to ensure clarity of understanding with all issues explored and goals for future learning set.

Student-led conferences ensure the focus remains on the students and the critical role they have in determining their own future development. Students realise that learning is something *they do*; it is not something that is *done to* them. They must accept a high degree of responsibility for

their own progress and determine, along with the teacher and parent, strategies that will be put in place for the future.

When used in class a student portfolio with clearly defined guidelines, and a clearly understood purpose, can do much to make a difference for learning outcomes. It can guide students towards becoming self-directed, independent learners. So often we hear teachers stating this to be their goal but seldom do we find procedures in place which actively lead students towards this end.

All too frequently school programmes fail to provide opportunities for students to look critically at their own performance, to analyse their strengths and weaknesses, and to determine what next they could do to improve. Where teachers simply mark work without student involvement, where testing is used solely as a mark gathering exercise, where students have little opportunity to reflect on their performance, powerful learning opportunities are lost.

In these situations students will see learning as something which is done to them, rather than it being something in which they participate. They will fail to see themselves as being active participants in the process. They will learn to wait for the teacher to determine what it is they should be doing, to tell them what to do next, to determine how good their work is, rather than using their own skills and initiative to exercise a degree of control over their learning.

These outcomes will only be achieved when teachers are prepared to relinquish some of the power that has for so long been a traditional part of classroom culture. Teachers must be prepared to empower their students, allowing them as much freedom as possible to make decisions for themselves.

Where a teacher has been used to the traditional, *I'll teach and you will learn* approach, change will be difficult to achieve. These teachers need encouragement and support to gain the confidence to let go, to allow students to interact with each other and to take greater ownership for their learning.

Teachers would better serve their students by becoming facilitators of learning, seeking ways to move students to higher levels of achievement. Teachers working in this way take on the role of

coach, working alongside their students, motivating, providing resources, encouraging, suggesting further practice, building on current knowledge and skills, in exactly the same manner in which a sport's coach works with individual team members. Effective coaches work to ensure that team members use their strengths to perform to the best of their ability. They provide exercises as required to lift performance in areas of need. They ensure that there are no failures in the team, and all are supported to meet with success.

The class is the teacher's team. Teachers can work in a similar manner supporting all class members, assisting them find their strengths and weaknesses, and giving additional practice in areas of need. Teachers working in this way develop strong supportive team structures. They are valued as leaders who guide and assist students through their studies, building on current achievements, and challenging them to move further forward. Students learn to take control of their own future knowing there is appropriate help available where required. They learn they can achieve highly through their own efforts. They can set their own goals and feel good about being successful. Self-esteem can be enhanced through on-going success rather than regular failure.

The Learning to Learn portfolio model is a powerful catalyst to facilitate such changes within the school. It does much to make a difference to the way teachers view their role in the classroom. Similarly it does much to make a difference to the way in which students view their role.

The portfolio shows students and their parents growth over time so that a picture is built up of overall ability and progress. It shows what can be, rather than what can't be done. It shows that process, and not simply achievement, is important. The portfolio provides assessment information linked to curriculum objectives showing evidence of progress as measured against clearly defined performance standards. This information can be used to provide hard data to meet reporting requirements where requested and give much valuable information for reporting student progress to parents.

More significantly the portfolio can be a vehicle for empowering students to take increasing responsibility for their own learning. It can assist with the development of student self esteem through providing a means for them to display work of which they are proud; work of which they could say, "*I didn't know I could do so well!*" They become empowered to judge their own

Learning to Learning in the 21st Century.

performance. They become more highly motivated through the knowledge that they have the key to learning within their grasp. They can confidently set their own future goals, work towards achieving these, and thus become true independent learners.

Where these skills are developed we are giving students skills for life. We are giving them the skills to learn how to learn. We are empowering them to become self directed, independent, life long learners, able to cope with whatever challenges they may face in the new millennium.

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REFERENCES:

- Atman, K. (1988) *Conative Process and Goal Accomplishment Style of Junior High School Students*. Paper presented at the American Educational Research Association annual general meeting., New Orleans, LA
- Bellanca, J & Fogarty, R. (1991), *Catch Them Thinking*, Australia, Hawker Brownlow Education.
- Brooks, J. G. & Brooks, M. G. (1993), *The Case For Constructivist Classrooms*. Alexandria, Virginia, ASCD.
- Burke, K. (1993) *Authentic Assessment – A Collection*. Australia, Hawker Brownlow.
- Burke, K. (1994) *How to Assess Thoughtful Outcomes*, Australia, Hawker Brownlow Education.
- Costa, A. C. (1991) *The School as a Home For The Mind*, Australia, Hawker Brownlow Education.
- Finn, J.D. (1998) Parental Engagement that makes a Difference. *Educational Leadership* Vol55.No.8
- Gerstner, Semerad, Doyle and Johnson (1994) *Reinventing Education:America's Public School System*.
- Glasser, W. (1992), *The Quality School* New York, Harper Perennial.
- Jackson, R. (1999) *Key in Teaching Teachers*. Article published in the New Zealand Herald. 28 June 1999
- Marsh, D (1999) *Preparing Our Schools for the 21st Century*. ASCD Yearbook.
- McTighe, J. (Dec, 1996) What Happens Between Assessments?, *Educational Leadership*, Vol54, No4.
- Paulson, F. L., Paulson, P. R., and Meyer, C. A. (1991) What Makes a Portfolio a Portfolio? *Educational Leadership*, Vol. 48 No 5.
- Tierney, R. J. Carter, M., Desai, L. (1991) *Portfolio Assessment in the Reading –Writing Classroom*. , Norwood, MA. Christopher Gordon
- Wasley, P. A. (May 1991), From Quarterback to Coach, From Actor to Director. *Educational Leadership*.
- Wilson, J. & Wing Jan, L. (1993), *Thinking for Themselves*, Australia, Eleanor Curtain Publishing.
- Wolf, D. P. *Assessment as an Episode of Learning*, Undated paper published by the Harvard Graduate School of Education.
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