

# **‘E-teaching’ with Interactive Whiteboards**

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## Striving To Better Off We Mar What’s Well

*“After 20 years, despite a vast investment by government and parents the desktop driven strategy has only had a narrow and limited impact on teaching and learning. Use of that strategy alone needs to be questioned.”* (Lee and Boyle) How many school administrators have been frustrated by the fact that the ever growing ICT budget has made only a limited, sporadic impact on classroom practice? Why might this be the case? The good hearted Albany in Shakespeare’s King Lear probably sums it up best, “striving to better off we mar what’s well”. In Education’s headlong pursuit to take advantage of the enormous potential of computers we seemed to forget what fundamentally underpins successful schools, that is, quality teaching by professional teachers who know and understand their students.

It should be pointed out that I have been an active and enthusiastic participant somewhere in or near the front section of this vanguard. All too often I have seen a new program or web site and thought ‘this would be great when I teach Science, or ‘I would love to show this to my class’. With hindsight however I would say that the way ICT resources were set up in the schools within which I have taught tended to undermine my teaching, rather than enhance it (ICT resources that I probably set up I might add)

Personal computers have tended to undermine ‘teaching’ because ‘teaching’ with a computer is an extraordinarily difficult task for a variety of reasons. Trying to teach a class a new concept using computers where there are only a small number within the classroom is practically impossible. To begin with you cannot present a concept where all the class cannot see the computer screen. Computer Labs are the other main way schools set up ICT resources, yet those teachers with experience teaching in a computer lab will know just how difficult it is to ‘teach’ in these settings. Gaining and maintaining student attention is a tricky task when students are sitting in front of a computer. The scope of a teacher or student to take an investigation into a particular concept in an unexpected direction is limited by the flexibility of the particular software being used. If it is possible to adapt the software, or perhaps open another program, the process of gaining the class’ attention, directing the class in a particular direction, seeking their opinions on the implications of this direction and making this new piece of information fit in with their existing knowledge is again practically impossible. This is why terms like ‘self directing’ and ‘self administering’ are often associated with good educational software. The point of this article is not to diminish the value of computer labs and computers in the classroom, rather to point out that while these resources are aimed at facilitating student learning, they don’t really help us ‘teach’ and, as such, it is unusual to find significant changes in classroom practice prompted by the use of ICTs.

## Interactive Whiteboards And E-Teaching

However through the introduction of interactive whiteboards at Richardson Primary School over the past two years things have changed. A recent independent review of the interactive whiteboard initiative found that *“Richardson Primary School has developed a strategy for making the wise use of ICT in education that is significantly different to those that have been*

*employed over the twenty years... The Richardson effort represents a near revolution in the use of ICT in schools."*

Briefly an interactive whiteboard set up involves the image generated by a computer being projected onto a touch sensitive screen the size of a conventional whiteboard, where a touch is the equivalent to a mouse click. It is simply a touch screen computer with a very large screen. However the sum is greater than its parts: it is more than a computer, projector and screen. Lee & Boyle state, "*After noting how the technology is now being employed at Richardson, the generic term 'interactive whiteboard' fails to communicate the immense education capacity of the tool. In reality Richardson is using the technology as a large-scale, digital convergence tool.*"

Interactive whiteboards have allowed teachers at Richardson Primary to make significant changes to their classroom teaching practices. Interactive whiteboards have allowed our teachers to 'e-teach'. Succinctly, 'e-teaching' involves the use of ICTs to enhance the art of teaching. Harnessing the potential of digital technology in presenting a concept, exploring the implications, placing the concept in various contexts, creating links with existing knowledge, and leading discussions that probe student understanding and allow students to take their learning in personally relevant directions. E-Teaching is a group activity and so sits in contrast with the conventional approach of incorporating ICTs into teaching programs, where normally the activities are aimed at the individual or small group. The group can range up to the size of a normal class group. E-Teaching is less didactic creating a truly interactive teaching and learning environment. Students can also interact with the content and context of the lessons by digitally capturing and manipulating their work and local environment, incorporating it within the lesson and sharing it with the group. E-Teaching in the Richardson context involves teachers managing this convergence of digital information from a wide range of sources and devices when presenting, discussing and reflecting upon a concept with a class group. In an 'e-teaching' context, a multi-literacy teaching and learning environment is standard. Interactive whiteboards allow teachers to teach multi-sensory, multi-faceted style of lessons, seamlessly jumping from one type of digital media to another. The students' experience with their computer games and TV enables them to easily engage with this style of teaching.

### Lead Educational Issues, Manage Technical Issues

What has come to be known, as the 'Richardson Strategy' for the implementation of interactive whiteboards was not well thought out in advance. There have certainly been times when we have felt like Forrest Gump, with amazing things seemingly happening to us while we were just trying to survive day to day. Looking back however there were key decisions that were made that led to the success of the interactive whiteboard initiative.

- **LEAD ON EDUCATIONAL ISSUES.** The technology at Richardson has proven to be incredibly robust and the operating software has a Microsoft look and feel to it. This enabled teachers to start using the basic features of the technology after only a brief introduction. The school's leadership team was able to provide leadership on issues such as "why are we using SMART Boards in our teaching?", rather than deferring the leadership to relatively inexperienced teachers with good technical skills who would be obliged to lead on basic technical issues such as "how does the technology work?".

- **OBTAIN A CRITICAL MASS OF BOARDS.** Early in 2003 enough boards were purchased so that the majority of teachers were using them. Teaching with interactive whiteboards requires changes in pedagogy and presents many opportunities. One or two teachers by themselves could not hope to fully cope with these challenges.
- **PROVIDE VISIBLE SUPPORT THAT THE TEACHERS NEEDS.** Not only was the school leadership team an enthusiastic advocate of the initiative within the entire school community, the number of administrative meetings at the school was halved to allow sufficient time for teachers to reflect, share and discuss what they were doing in their classes on a regular basis. This action sent a clear message that what the teachers were doing was important and valued. At the time there were no clear examples that Richardson could follow, the pedagogy that was developed, ‘e-teaching’, was done so almost entirely inhouse.

### **In Teachers We Trust**

The key to the success of the interactive whiteboards and the development of ‘e-teaching’ was the professionalism of the teaching staff at Richardson. Teachers and their skill to teach is fundamentally the greatest asset that a school can have. Teachers were motivated to base their use of the boards in the existing context of their professional skills as teachers and encouraged to discover ways that the technology could enhance these professional skills. Through group sharing, discussion and celebration of their experiences a rich set of teaching strategies was developed that took advantage of the interactivity and digital convergence the interactive whiteboards provided. Teachers were allowed to follow directions that were personally relevant to themselves and their teaching context. This provided a great diversity of skills that could be shared across the teaching staff, ensuring that all were leaders and learners during the professional support sessions. No expectation was placed on teachers other than they would ply their skills to the best of their ability. The results exceeded all expectations. Two years ago the majority of the teaching staff had only rudimentary ICT skills. In the past two years the group has markedly enhanced those skills and now wants the higher order skills to progress the program even further. Lee and Boyle found in their review that *“collectively the Richardson staff has developed an expertise in the educational use of the interactive whiteboard technology that is probably unparalleled in Australia.”*

### **Outcomes**

*“Richardson is the first school in the ACT, and probably Australia, where the total school community, the students, staff and parents, has embraced a new approach to the use of ICT, which enhances the holistic education of the students”* (Lee and Boyle). The reason our school community has embraced this initiative is the clear enhancements that the use of this technology has made to teachers’ ability to teach and consequently the students’ ability to learn. Readers are encouraged to read Lee and Boyle’s review to obtain a more comprehensive analysis of the interactive whiteboard program at Richardson Primary. The report can be found at [www.richardsonps.act.edu.au](http://www.richardsonps.act.edu.au)