

OPINIONS



A PUBLICATION OF AISWA

August 08

this issue

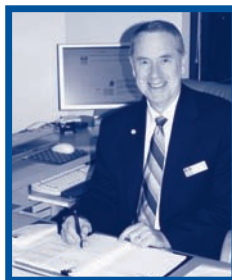
“CHANGE IS THE ONLY CONSTANT” SAYS FUTURIST, MARK PESCE¹, REFERRING TO THE TYPICAL YEAR 10 STUDENT IN 2008 WHO HAS BEEN SURROUNDED, SINCE BIRTH, BY INCREASINGLY RAPID CHANGES IN TECHNOLOGY. INNOVATIONS THAT MIGHT HAVE ONCE BEEN CONSIDERED TO BE THE WONDER OF THE DECADE ARE NOW BEING INTRODUCED EVERY YEAR AND MOST OF US ACCEPT IT AS PERFECTLY NORMAL.

YOU TUBE, POD CASTING, BITTORRENT, WIKIPEDIA, MYSPACE, FACEBOOK, BEBO, TWITTER, SECOND LIFE, IPHONE HAVE ALL BEEN INTRODUCED IN THE PAST FIVE YEARS.

WHAT DOES THIS MEAN FOR SCHOOLS? ARE TEACHERS OBSOLETE? IS THE CLASSROOM A MUSEUM PIECE OR A DISRUPTION TO LEARNING IN THE DIGITAL WORLD?

SEVERAL RESPECTED INDEPENDENT SCHOOL EDUCATORS SHARE THEIR THOUGHTS AND OPINIONS ON THE RESOURCING, IMPLEMENTATION, MANAGEMENT CHALLENGES AND REWARDS THEY HAVE EXPERIENCED IN THIS TIME OF RAPID TECHNOLOGICAL CHANGE.

EDUCATION IN A DIGITAL AGE



Graham Rixon arrived into the role of Principal at Penrhos College in 1986. At that time, computers were thought of as replacements for typewriters. Even

in the early 1990s, when Graham began working towards a laptop program, having researched the topic in Melbourne and USA, his concerns were more with the computer as a hardware tool and less with the learning opportunities that the Internet could provide. After all, even by 1993, today's Year 10 student had only just been born, a new name on the College's waiting list and the Internet was also an infant, with no real certainty that it would be a player on the education stage. The initial doubts of the College's parents about the implementation of a laptop program were based on the cost and the risks associated with portable equipment. They also had concerns about the effects on their daughters' postures with the weight of laptops in school bags.

“As part of our program of introducing laptop computers into the school in 1997, we initially had computer information evenings for parents,” says Graham, recently retired. “We demonstrated the benefits of technology and provided answers to parents' concerns. Our implementation plan involved engaging the services of a physiotherapist to encourage and train the students to develop good posture when using the laptops and when carrying their school bags.”

Over time, the laptop program has been accepted as an integral part of the learning process of students at Penrhos and the computer information evenings are no longer required.

Graham provides the following hints for schools embracing education in a digital age:

- Ensure that the budget is adequate to enable good staff Professional Development specifically related to the use of technology and make sure you supply the staff with a computer.
- Ensure that you have adequate, trained ancillary support staff.
- Resource the Information Technology Department sufficiently to ensure appropriate maintenance, upgrade and back-up storage of the school's technology equipment and data.
- Select brilliant teachers as Junior, Middle and Senior IT co-ordinators with the role of helping staff members to use technology in a creative way. In this way, you will have a teacher who is passionate about technology inspiring and enhancing another teacher's use of it.
- Provide examples to staff of Lighthouse Departments (internal) and Lighthouse Schools - Lighthouse Departments and Schools are models of powerful teaching and learning practices using Information Communication Technology as a vehicle for whole school change and systemic change.
- Appoint key staff with ability, drive and enthusiasm to run and operate the technical support area.

“Technology encourages students to take responsibility for their own learning,” says Graham.

It requires not so much that schools change but that we, as educators, teachers and parents, change.
(Seymour Papert, in 1993).²

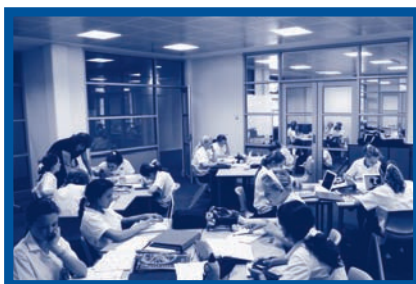
At Presbyterian Ladies' College, Principal Beth Blackwood and Deputy Principals, Kim Edwards and Keith Anderson are enthusiastic about the evolution of a different approach to teaching and learning that the College's laptop program has supported. Every student from Year 5 at PLC has her own laptop.



"Laptops, like other digital equipment, are creative communication tools," says Beth, PLC Principal since 1997. "Anchoring students to desktops or in one place is missing the point of today's students and their way of being. We have also found that technology has led our approach to the nature of classroom structure and management."

PLC has developed a co-teaching approach in the PLC Middle School classes (Years 7 to 9) to complement the laptop program. "Co-teaching" explains Kim Edwards, Deputy Principal, Teaching and Learning (Staff) "is like a great marriage at work. Co-teachers are able to observe another professional in action throughout the period."

"In response to the laptop program at PLC," says Kim, "we have designed classrooms that are now more open, have more glass, and are more transparent.



The physical classroom environment matches the fluid learning environment. Students can move into a quiet space, beyond a glass wall, to work but are still in eye contact with the teacher, in wireless contact with the subject that is being studied by the class, and the teacher can observe the computer window on the student's machine at all times."

Although it sounds like a contradiction in terms, Kim says that PLC has found that technology in the classroom requires teachers to be far more structured in the way they get students to notate and organise their information. This ensures that the student's thinking is supported by the digital tool rather than driven by it.



Beth, Kim, and Keith see huge benefits in the students having access to the digital version of their lessons 24/7 which

facilitates learning beyond the classroom. Core material plus optional extras are embedded into their laptops which focus their learning and saves time-wasting searches on the internet during class. Far from replacing the teacher, they say, education in a digital age uses technology to supplement the teacher. Technology makes differentiated learning much easier and caters for a range of different learning styles. Lessons can be offered to optimise the visual, auditory and kinaesthetic learning styles of students.

The experience at PLC supports research evidence that, generally, girls respond strongly to the social opportunities that computers provide, but need more encouragement to learn the higher order technology skills than would the average boy. As a girls' school, PLC has responded to this evidence and has explored ways of ensuring that higher order technology skills are acquired.

Keith Anderson, Deputy Principal, Teaching and Learning (Students) sees part of the excitement and challenge ahead for schools will be in keeping up with the new technology. "New portable devices such as iPhones are opening up possibilities for different ways of engaging students," he says, adding "if schools don't embrace the technology, there will be a growing divide between how students learn inside and outside of school."

Schools, says Keith, must have the agility to move their infrastructure and hardware to respond to the next useful stage in technology.

Anchoring students to desktops or in one place is missing the point of today's students and their way of being.

Beth, Kim and Keith suggest that schools:

- enthuse and engage teachers with the possibilities of technology, thinking of it as a teacher's "sandpit" where they play and experiment
- support and showcase exemplars, the Lighthouse Schools
- introduce new hardware concurrently with the relevant Professional Development to encourage teachers to use the new equipment
- use "champions" among staff to lead the way, provide support and explanation
- skill teachers in good computer management in class to avoid students being distracted by computers, entertained instead of thinking
- ensure that technical departments, in efforts to ensure cyber safety, don't apply practices that are so restrictive as to discourage use of internet
- use creative ways of funding and maintaining the IT teaching resources that are needed to maintain an excellent education in a digital age.



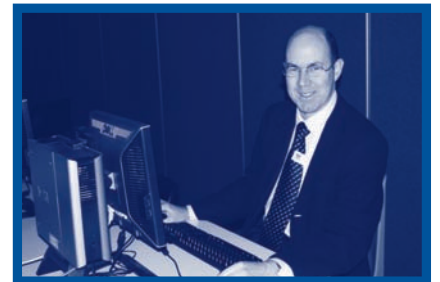
INFORMATION TECHNOLOGY DEPARTMENTS

The ICT Manager of St Stephen's School, Ian Mackay-Scollay, places great importance on a school's ability to attract and maintain competent IT staff to support the huge investment in IT equipment which, until recently, may have been the main focus of the school's expenditure.

"Support systems", he says, "including top IT staff, and important hardware and software such as large application packages and databases, have been left to happenstance."

According to Ian, the independent school information technology environment in a digital age can be more diverse and challenging than that of, for example, a medium sized government department or private company. He considers that the imperative of employing suitably skilled IT support staff should not be underestimated.

"Every school, whether large or small" says Ian "has many applications and specialised educational programs and there is an almost unrealistic expectation that IT staff will be familiar with them all - even those that are highly specialised and used infrequently. For example, IT can be called on to support administrative staff in the use of a mail merge in a Word document, or a formula in Excel as well as providing assistance to teaching staff using a specialised visual learning tool that inspires students to develop and organise their ideas such as Inspiration. The IT department in a school may also be responsible for organising Professional Development for the teaching staff, integrating the use of IT into the classroom, and supporting the students



and staff in the use of laptops, interactive whiteboards and digital educational programs.

Education in a digital age relies on complex networking infrastructures. Ian considers the importance of their design, implementation and maintenance cannot be underestimated. For example, St Stephen's School relies on 20 servers across 2 campuses. This complex environment requires specialist network administration which imposes a huge impost on the school budget. It is a round the clock, year long requirement that all IT equipment runs smoothly 24 hours a day, 7 days a week to ensure such things as access to the school portal; staff and student web access to emails and school files from home; and staff access to online reporting systems.

"Gone are the days" says Ian, "when IT staff could be forgiven for inadequate people skills due to their absorption in technology. Now it is tremendously important for IT staff in schools to develop rapport with the users (administrative staff, teachers, students) so they can manage the balance between functionality and individuality in the classroom on the one hand and Best Practice in technology delivery, on the other."

Education in a digital age relies on complex networking infrastructures.



FUTURE DIRECTIONS

Ian considers Learning Management Systems will extend the school day. Students will not feel disconnected from their teacher or classmates when they go home. It is already possible for students to find assistance online from materials their teachers have provided. He sees the class time as the arena for the teacher to deliver the one on one material while out of school hours are for extension and research.

With improvements in battery life, the use of small digital devices as educational tools is predicted to grow. "These will have huge memory capacity," says Ian "and will combine the functions of a desktop and laptop. They will be to the student of tomorrow a type of 'pencil case item' of the past."

CYBER POLICY

Kate Hadwen, Head of Boarding at Perth College, acknowledges there is a tension between risk management and education when cyber policies are developed in schools.

"Policy development is critically important" says Kate who is working towards a doctorate in Education Cyber Policy. "Good policy can buy you out of a situation but policy that is not written thoughtfully can also buy you into a difficult situation."

She recommends that schools look at their policies, ensuring that they dictate that education is paramount at every single level.

Schools should be pro-active in ensuring that teachers know how to address improper internet usage if it happens on their watch rather than avoiding the issue and relying on something that is written in a policy document tucked away in a cupboard, never discussed openly.

"It is possible", says Kate, "for schools to consider the student voice and develop policy in negotiation with the student body, in order to keep up with the current, and ever changing, situation."

Kate also expresses the opinion that teachers should not be discouraged from exploring and engaging with internet social networking sites such as Facebook because it is important for them to be familiar with the students' milieu. The same rules of cyber safety should apply to students and staff, alike.

"Above all", says Kate, "cyber policy should assist the creative and inspirational use of technology in education."

ENDNOTES

¹ Mark Pesce, **Those Wacky Kids**, video presentation in the 2008 series of symposia, presented by the Australian Council for Educational Research and **education.au** supported by the Commonwealth Department of Education, Employment and Workplace Relations. The symposia aimed to explore and illuminate the possibilities and the realities of the implementation of the digital education revolution.

Viewed 17 July 2008, <http://www.educationau.edu.au/jahia/Jahia/home/pid/631#goto-3589>

² Papert, Seymour (1993) **The Children's Machine: Rethinking School in the Age of the Computer**. Basic Books, New York.

Above all, cyber policy should assist the creative and inspirational use of technology in education.

