



REFLECTION DAVID LOADER

# TRANSFORMING EDUCATION

## THE INTRODUCTION OF LAPTOPS TO THE CLASSROOM

AHISA Honorary Member Associate Professor David Loader OAM reflects on the challenge of introducing a 1:1 personal computing program at Methodist Ladies' College, Melbourne, in 1990.

**IN THE** late 1980s I became involved in what was to become one of the defining projects of my time as Principal of Methodist Ladies' College (MLC), Melbourne: Australia's first school-based 1:1 laptop program.

Computers were first introduced into the MLC Business School – not into the academic program – in 1980. Later came Apple IIes, and in 1983 the first Computer Studies teacher was appointed. However, the idea for personal computing throughout MLC was first conceived in 1988, following a demonstration I witnessed by Liddy Nevile, now an Adjunct Associate Professor at LaTrobe University. At that time Liddy was working on implementing Seymour Papert's idea for school transformation – a computer for each student. I was struck by the possibilities for MLC and, together with a couple of equally inspired teachers, planned a program for one Year 7 class to have access to a set of desktop computers. That program commenced in 1989.

This trial with one class was deemed a great success by students, staff and parents. Parents whose children were not in the 'computer class' were upset that their children were missing out. Our review of the trial concluded that

all students would benefit from access to computers at school and at home, in all classes and at all times. But how was this to happen? A desktop solution for all classes and in all classrooms was neither practical nor financially feasible. Instead, we adopted the relatively new invention of a laptop, which students could use both at school and at home.

### Brave new world

In 1990 we made the brave step of making laptops compulsory for two Year 5 classes (82 students) and invited Year 7 parents to participate; 60 Year 7 students (two classes) also bought laptops. Again, the program was considered a success by students, parents and staff. There was no looking back: in 1991 it was decided that all students in Years 5, 6 and 7 would have laptops. In 1992 this increased to Years 5 to 8, so that by 1996 there were more than 2000 laptops in use in the School, with every teacher and every student in Year 5 or above with their own laptop.

The introduction of laptops 25 years ago was not a publicity stunt, as some of my peers described it, but an educational assertion that a basic education in a digital age goes beyond the so-called basics of the 'three Rs'. Drawing on Papert's work, we argued that the

introduction of laptops represented a paradigm change from teaching (teacher-focused) to learning (student-focused) – a new approach to pedagogy that focused on each student taking responsibility for their own learning by 'constructing knowledge' (constructivism).

We argued that this 'constructing' of knowledge would be best facilitated with tools that would allow for real world modelling, that is, the new digital media. We also sought to broaden the curriculum by introducing both LogoWriter and Lego. LogoWriter is an easily learnt computer coding language, which allowed the students to write programs that blended graphics and narrative. This was linked with the use of Lego blocks, to give students concrete materials with which to model and even to build simple robots.

We wanted the students to have tools that allowed them to interact with the real world, which would enable them to progress at their own pace, and encourage them to find 'teachers' – real, virtual and amongst their peers – to assist with their own learning. So it was not so much specifics around the technology or the content that we sought to teach 25 years ago, but rather to enable girls to develop personal dispositions, such as initiative, inquisitiveness, persistence, collaboration and sharing. Today we would invoke Carol Dweck's theory of growth mindsets, not then formulated, to support our programs of growing knowledge and intelligence.

### Managing change

Today, digital accessories are in all schools and the educational case for 1:1 devices has been long won. The issue of change management, however, remains ever alive for Principals. Looking back, how did we convince parents to pay for these expensive machines and accept such radical changes in the school?

Getting to first base was not easy. When the Parents' Association met to discuss this new program, it was supported by a majority of only one vote. When the

College Council debated it, I thought the entire idea was going to be rejected. The Council debate was going badly from my point of view when Council member Professor Michael Porter spoke. He began by saying that he was not happy and my immediate reaction was that the program was doomed. But Michael went on to say that his unhappiness was because the Principal was being too timid! 'Think even bigger,' he said. At that moment I finally relaxed because I knew I had the numbers for the program to happen. The Council continued to be very supportive from that day onwards.

It is perhaps hard in 2015 to understand, not just the opposition, but the hostility by some to the very idea of personal computing. I wish now that I had collected all of the criticisms levelled at the program and at me personally. I was called 'an instrument of the CIA' (one of the more colourful arguments). People scoffed at the idea that paper and pencil could ever be replaced as the chief means of learning and communication: 'Computers are just an extension of the typing pool'. The fear factor was regularly invoked: 'MLC students will fail the VCE and not gain access to university'. And I would dearly like to meet again the accountant who said to me, 'I will *never* use an electronic spreadsheet in my accountancy practice!'

I felt personally hurt by much of the criticism. Despite that, I endeavoured to listen to my critics (and I acknowledge I did make many mistakes). I would take note if they had a good point and try to reply to their criticisms where I felt they were mistaken. One parent, unhappy with the decision to introduce laptops, went so far as to contact Melbourne's broadsheet, *The Age*, which was typically unsympathetic to independent schools, with the objective to ridicule the initiative. The Editor contacted me and asked me about this 'crazy' venture. I explained why a school might see a laptop as a thinking tool and the digital environment as one in which students should gain knowledge and experience. The result was not the

expected condemnation but a half-page news article congratulating MLC on its initiative – with a photograph on the front page.

## Innovation hurdles

Of course there were substantial technical problems to overcome. The classrooms did not have power and a laptop's battery life then was only about two hours. There were lost and damaged laptops and difficult negotiations with insurers. Finding people who could maintain the computers was a challenge and there was an even larger challenge to find spare parts. (New computers sometimes had to be broken down for parts!) There were no technical assistants for the staff and so we sought out young 'geeks' who did a wonderful job and who themselves went on to successful careers in the commercial world after gaining experience with us.

One of my big mistakes was to let the 'techies' get too far ahead of me. They knew so much more about the machines, so I listened to them and as a result I let the technology get ahead of the staff and even of the Council. For example, we introduced the internet too early and had difficulty keeping it running. It was important that the laptop program was run by the educationalists.

Then there was the issue of our staff training. Where were we to find 'teachers' for the teachers? We were all walking in unfamiliar territory. We could not have made a success of this laptop introduction without the insights of Seymour Papert, and the support of external people like Liddy Nevile, Gary Stager and Bruce Dixon, to name but three of the key players. Then there were the terrific staff members who were early adopters of the idea: Steve Costa, Ruth Baker, David Dimsey, Merle Atherton, Fran Keller, Pamela Dettman and many more. As with all initiatives, we needed champions of this new way, and these were just some of them.

Our laptop initiative preceded Windows: no mouse, no hard drive, a monochrome screen and MS DOS commands. There was no internet. I sometimes think that the digital learning in those early years surpassed what is happening in many schools today, where the internet has devalued the digital device in the classroom from one where knowledge was constructed to one that merely gives access to information and facilitates communication.

So what did I learn from a change management perspective? I learnt that a strong shared vision which is supported by theory/philosophy is essential. I learnt that you cannot do something by yourself; you need a team and technical support. I learnt that while criticism can be hard to take, it is vital to the learning process. I learnt that you don't just add something new; it needs to be integrated and some past practices jettisoned. Celebrating successes, building new career paths, always talking up the program and holding firm in the face of doubters are critical to success.

In 1990 the laptop program was a 'crazy' dream that we managed to successfully bring to life. In 2015, digital devices represent a disruptive intervention that schools seem to be ignoring at their peril but, for the sake of their students, school leaders today must still dare to dream. ■

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David is the author of *The inner Principal* (1997) and *Jousting for the new generation: Challenges to contemporary schooling* (2007). He co-authored *Our school, Our future* (2011) with Professor Brian Caldwell.

David now works with Principals and senior staff in reflection and analysis, in strategic goal setting and evaluation, and to support and evaluate innovation. He currently consults for the Centre for Strategic Education, the Catholic Diocese of Lismore and Girl Guides Australia and is convening a conference for Principals to be held in Suzhou, China in March 2016.