

# INTRODUCTION TO THE SECOND EDITION

The first edition of this book was begun in 2004 and mostly written in 2005 and part of 2006. A reflection of the state of 1-to-1 at the time, the book reviewed several large-scale and smaller-scale programs, reflected a review of studies and research, and included the author's and others' experiences running 1-to-1 programs. It did not cover tablet PCs, because there were fewer installations at that time to consider.

## What Has Changed Since 2006?

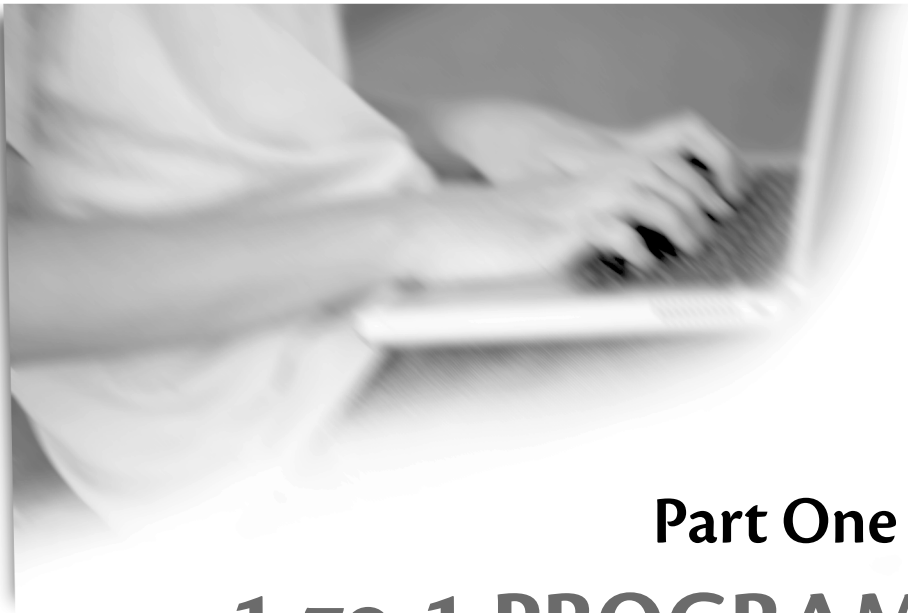
When it came time to write a second edition, two questions became clear: *What should be more fleshed out?* and *What has changed in 1-to-1?* The more fleshed-out ideas make up the bulk of three new chapters: “1-to-1 Leadership”, largely written by esteemed 1-to-1 leaders Bruce Dixon, Leslie Wilson, Gary Stager, Milt Dougherty and Ian Stuart; “1-to-1 Tablet PC Programs That Work”, written by Dave Berque of DePauw University, the most qualified of anyone I know to write this chapter; and “The Shift (Web 2.0 and Beyond)”, referring to the shift toward learner-centred environments.

Following are some of the things that have changed in 1-to-1 teaching and learning: first, some words about digital citizenship with input from Dean Ellerton and Doug Fodeman, followed by an interview with Tom Greaves describing the latest 1-to-1 results from the America's Digital Schools surveys; then Will Richardson on technology and his hopes for technology in education; and finally some closing thoughts.

### DEAN ELLERTON ON DIGITAL CITIZENSHIP

We live in a time where the world's collective knowledge is literally in the palms of our hands with today's mobile technology and persistent and immediate access to the Internet. Thus, it is more important than ever to teach students to harness this power in an ethical, informed manner. A teacher who is still focusing on the memorisation of large quantities of material is missing an opportunity to help guide students to use these powerful resources more effectively and more efficiently. In addition, the ease with which students can collaborate and communicate with any other connected individual is clearly an advantage that no other culture has enjoyed in our collective history. These powerful tools enable access to not only information, but also real-time thoughts, conversations, and ideas of experts, peers, colleagues, leaders and even enemies in a way that has never been available to scholars before. This, I believe, is what sets the current climate for a modern education far ahead of anything we have seen before. Consequently, I believe that it is the responsibility of schools and teachers to find ways to help children to learn these skills before they enter the workplace.

—Dean Ellerton, CIO, Information Technology Department, Brooks School, 2007



## Part One

# 1-TO-1 PROGRAMS THAT WORK



AMAZING AND POWERFUL THINGS happen when students have digital assistants at their fingertips to help them learn. Giving every student a laptop computer opens up an entirely new set of opportunities for both collaborative and self-directed learning. The educational paradigm shift that proponents of technology have long promised can become a reality when students have 1-to-1 access. The chapters in Part 1 reveal the possibilities of that paradigm shift by looking at successful 1-to-1 programs from around the United States.

We're a species of storytellers and story listeners, and some of our best learning comes from hearing what others have experienced, especially the challenges they've faced and the lessons they've learned. So the stories that follow can teach us much about the possibilities of 1-to-1 laptops. Each story reflects the unique factors – pedagogy, mission, demographics, teaching philosophies and funding – that determined the particular implementation strategies these pioneering programs adopted. We're fortunate to be able to learn from so many thoughtful educators who have started down the 1-to-1 road before us.

When Apple determines damage is over and above the warranty plan in place, Peck School splits the cost of the damage with parents of students who incur the damage. Generally, the most costly damage is to laptop screens, which can cost \$900 (approx. A\$1,100) to repair or replace. So far, it's been cheaper to self-insure, as generally only three or four such incidents occur per year.

The Peck School laptop program is small enough for this plan to work. Other schools will have to consider whether this plan makes sense for them. Every year, Peck looks at these costs and determines how much they're impacting the budget, and so far the decision to self-insure has proved cost-effective.

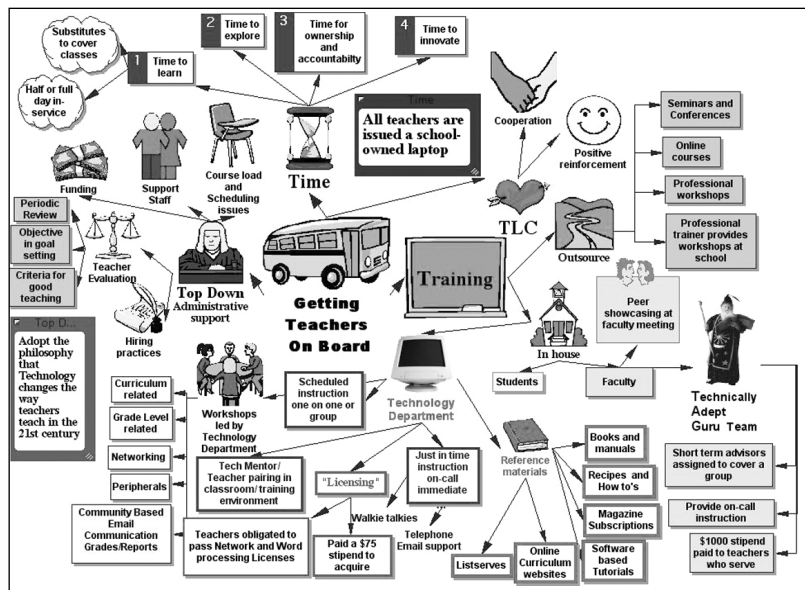
## Professional Development and Teacher Support

Peck knew that for technology to be integrated successfully into the classroom, teachers had to be on board with the program first. To facilitate this, teachers were given laptops a full year before students. In addition, several professional development initiatives were begun to support teachers' use of the laptops in their everyday teaching and preparation.

One initiative was known as the TAG Team approach. Technology-Adept Gurus – faculty members who already had an affinity for computers and were willing to be trained a bit more – were identified to provide peer-level technical support to other teachers. A special stipend was given to these TAG teachers. This initiative was based on the premise that it's often less intimidating to ask a colleague for help than it is to call technical support.

Figure 1.5

Inspiration created by Peck School's Leslie Maguire, Upper School technology coordinator, showing how teachers were brought on board with the laptop program.



Another initiative was “licensing” teachers for their demonstrated ability to use the network and productivity software. Teachers who attended a series of classes and passed a battery of skills tests earned a license when they were finished. It carried a small stipend as well as a certificate of completion.

These classes were conducted using differentiated instruction principles. Three types of training were offered. The first involved a tech-trainer-led computer lab, where teachers followed instructions step-by-step to familiarise themselves with a particular program or process. A second type brought teachers together to learn with a self-guided handout, with the tech trainer

## Surveying What Other Schools Are Doing

The good news for anyone considering the implementation of a new laptop program is that many good models and programs are already in existence (several of which we surveyed in Part 1). When the original Anytime, Anywhere group of schools started in 1996, there were no 1-to-1 models to follow. Fortunately, this group saw the wisdom of banding together and learning from one another, and the research and documentation they've generated in the past ten years provides us with many useful lessons and other keys to success. Today, we don't have to reinvent the wheel on 1-to-1; however, we do have to customise it to fit our schools' particular needs and purposes.

The references and resources section in the back of this book (Appendix B) is a good starting point for learning what other schools are doing with laptops and which models might work for you.

Schools with 1-to-1 programs seem particularly eager to share their experiences and know-how, so keep an eye out for articles about ubiquitous computing in *Learning & Leading with Technology*, *Education Week*, *Technology and Learning* and other professional development publications. ISTE has several active special interest groups, such as SIG-TC, that deal with 1-to-1 issues, and most states and territories have their own consortium of educational technology professionals, such as VITTA (Victorian Information Technology Teachers Association).

Participation in educational technology conferences, such as the Australian Computers in Education Conference, can inform your planning.

## Starting on the Same Page

Whenever a school sets out to enact a program with as many potential implications as 1-to-1 laptops, it's crucial that everyone start on the same page. Consequently, you'll find it very helpful to gather core reports and publications from your school and assemble them in a binder for everyone on your committee. This may include your existing technology plan, the school's mission statement, the results of recent state assessments and No Child Left Behind reports, demographic reports on your students and teachers, and similar publications. Before moving ahead, it's important to know where you are and where you've been.

Next, you'll want to begin documenting your school's plans to implement a 1-to-1 program. Keep accurate records of all your committee meetings, communiqués, minutes, drafts, statements and so on. Make sure these reports are action-oriented. Too many organisations have foundered in the planning stages of a new program because action items aren't regularly identified and no one is held accountable for seeing them through. You've probably attended plenty of meetings like this, where everyone leaves feeling energised and enthusiastic but nothing ever seems to get done. Every plan, idea and fact-finding mission should have a deadline or target date for completion, and an individual or group should always be assigned responsibility.



### Expert Advice

It's my opinion that schools spend way too much time on direct training of computer skills. Our model is messier in that some students may seem to struggle at first because they don't have a firm tech base, but after a few months their confidence surges. Students build a lot more self-confidence when they have to figure things out themselves. So don't spend a lot of time on the laptop itself, because the focus should be on the learning. Be patient and allow the program to evolve naturally and slowly, so long as your school culture can survive that; some schools may demand immediate evidence of success. If you let your laptop program evolve over time, it will be much stronger as a result.

— Howard Levin,  
The Urban School, San Francisco

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## An Expert Speaks

### BRUCE DIXON ON LEADERSHIP THAT MATTERS

Leadership can be a somewhat nebulous concept. In an educational context, it's an idea that provokes many conversations and plenty of policies, but not always enough action. To many, leadership can simply mean maintaining a status quo, particularly in schools that are perceived as "successful", which to many is in fact management, as opposed to leadership. In lower-achieving schools, the opportunity for reform presents more fertile ground for visionary leadership, though not every school is fortunate enough to be granted this opportunity. Add technology to the mix, and the impact of leadership is even more stark. Since the very first laptops were introduced to students in schools nearly two decades ago, leadership has underpinned 1-to-1's growth and in doing so has taught us much about how it may have an impact on effective school reform.

The first generation of 1-to-1 leaders were the pioneers, and they had great courage and imagination. These were leaders who believed that ubiquitous access to a laptop was something so important that they would risk failure to make it possible for their students. These were leaders who had not seen what might be possible, but still imagined it. These pioneering leaders were risk-takers who believed that school could be a better place for their students if they had access to their own personal portable computers; and they were committed to showing their staff, parents, students and their wider community that it was something they should do.

Often, they were what we might call Hero Leaders – extremely charismatic people who were able to build support for their 1-to-1 initiatives through the strength of their personalities. While they achieved a lot, when they left a position, so too often did much of the momentum that their vision had generated. Without them, however, we might still be walking our students down to labs once a week for their computing experience, and so we owe them much for their courage and vision.

The next generation of leaders was in many ways also a group of followers who often adopted the idea of giving their students laptops for a variety of reasons, most often because they genuinely thought they knew what might be possible in an immersive, technology-rich learning environment. By this time, the vision was more concrete than simple imagination. However, while some of this generation had a coherent leadership vision, a number also adopted 1-to-1 because it seemed like the "thing to do", or because the school down the road had done it. A number of schools that were led to 1-to-1 in this way had problems, which is to be expected, often because their vision was neither sustainable nor shared. These programs often became a technology access initiative rather than a more coherent and comprehensive foundation for pedagogical reform.

However, as time has progressed, we are now seeing a much more mature model of leadership driving 1-to-1 initiatives. Leadership is now investing in vision development that is genuinely shared across the whole school community, and, most importantly, that seeks to sustain rather than just initiate innovations such as 1-to-1. As the imperatives for this different pedagogical perspective are now becoming more urgent, leaders' familiarity with what Anytime Anywhere learning should look like is becoming more widespread and profoundly understood. The extent to which 1-to-1 can enable unprecedented personalisation is now accepted, the benefits of students' building understanding in a constructivist learning environment is now clearly understood by many educational leaders, and the inevitability and benefits of learning in an immersive technology environment are no longer the subjects of long debate.