Features

Screen time for the kindy kids

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UWA’s Stephen Houghton is monitoring school use of devices.

IT’S a back-to-school moment for parents at a private school on Sydney’s leafy north shore as they cram into the library to hear about what’s in store for their children when they start kindergarten in the new year.

At this “orientation” morning late last year, parents are given tips on school lunches, uniforms and shoes, before teachers briefly outline the school’s approach to dealing with conflict and its religious education philosophy. And then it’s on to the serious business of iPads.

This school has become one of the first in Australia to mandate iPads for all children all the way down from Year 6 to kindergarten, where they can be used for up to two hours each day. The school calls it Bring Your Own Dedicated Device (BYODD), and the program means that parents have to buy a $500 iPad for each child enrolled at the school, where it remains throughout the term.

The teachers have come prepared to sell this brave new world to the parents. The deputy principal, a smartly dressed woman in her early 30s, reassures parents that iPads “enhance” rather than replace traditional teaching, and she explains how the children have become more engaged as a result of using them.

Some children use the word “research” to describe what they do with them, she adds. The teacher then shows a short film made by kindergarten children, with the help of their Year 6 mentors, thus demonstrating one of the main uses of tablets in this school and many others.

The morning then becomes bogged down in IT jargon as the librarian, who doubles as the school’s IT expert, explains the ins and outs of configuring the iPads and using email and the intranet.

Each child will be assigned an email address in their own name — even before they can read and write. The librarian’s task is made more difficult by some glitches in the PowerPoint presentation that prevents the pictures from appearing, which she admits is “very frustrating”.

Most of the morning is spent talking IT. The fixation on IT might explain why the library has very few books, and why the teachers say next to nothing about what the school actually teaches. The Australian has chosen not to name the school because this writer attended the meeting in a private capacity.
The parents at this school seem sceptical. Some ask probing questions about exactly what sort of research the children do, how the school limits time use, and whether it’s possible to buy a cheaper version rather than the $500 iPad specified by the school.

The deputy principal says the time limit is no more than two hours a day, and that the iPads cannot be used during recess or lunchtime.

But for kindergarten children, those two hours are in fact greater than the one hour “screen time” limit recommended by the federal health department for children aged two to five.

In addition to the other screen exposure, the two hours of school screen time could mean that many children at this school are getting several hours of exposure each school day.

Privately, parents who have multiple children at the school have complained bitterly to the media about the extra cost, while one parent used a blog to vent concerns about the school’s lack of openness about BYODD.

“As a parent at the school, what are the increased educational benefits based on? What five-year-old is not going to want to play with an iPad? Any time the school is questioned about this, they never give an answer except for increased engagement — which is hardly an educational benefit,” the parent writes.

“The school is currently undertaking a review, which has not been published, however, (they) have rolled out the program for next year. When did pedagogy or qualitative and quantitative results become replaced with one-line statements that are not backed up?”

The dawn of the BYODD era began with Kevin Rudd back in 2007 when as opposition leader he declared that every school student from Year 9 upwards should have their own laptop, at a cost to the commonwealth of $2.2 billion. Over the life of the Digital Education Revolution program, the government delivered almost one million laptops to these students, but the program was quietly phased out at the end of 2013.

Since then, schools have introduced their own BYODD schemes for lower secondary and even primary grades. Last year some extended it to infants’ classes and more will follow this year.

As this presents an additional cost to parents, many of the schools leading this trend are in more affluent areas. (Some use the term Bring Your Own Device which means parents are free to choose the type of tablet.)

Deploying technology to engage students presents both benefits and risks, although this is such a recent innovation that it is hard find definitive research results, according to experts.

Independent and Catholic schools are at the forefront of introducing BYODD into the lower grades. This year, 38 out of 112 Catholic primary schools in Sydney will adopt the program, while at least two will extend it to kindergarten.

A national survey last year of 1267 schools in all states and territories found that 27 per cent have a BYODD strategy, up from 19 per cent the previous year.
The survey by learning resource provider Softlink also found that 12 per cent of primary schools had such a strategy, although this figure was unchanged from the previous year.

Early learning expert Kristy Goodwin, a Macquarie University academic who runs her own consulting business, says preschools are also introducing tablets at a rapid rate and that much of her work now involves advising these schools.

While Goodwin can see the learning benefits of tablet technology and has written books about the subject, she warns that poorly managed use has far-reaching implications for children’s brain, eye and physical development.

“Tablet use changes brain architecture in really significant ways,” she tells The Australian.

“Kids now process visual images before text because they’re processing so much visual content.

“They want instant gratification. It’s the staccato effect, jumping in and out of web pages with many browsers open. We are not seeing that deep knowledge gathering. It’s like a butterfly that dips in and out.

“We are seeing some evidence in physical and eye health issues. There are issues with eyes, posture, musculoskeletal problems from being hunched over an iPad. Sleep deficits are emerging in children because so much time on tablets delays the onset of sleep.”

One researcher trying to bridge the research deficit is Stephen Houghton from the University of Western Australia who has been tracking the technology use of 3000 children aged eight to 16 over the past two years. So far, the study has found that some primary school children use computers for more than five or six hours each day, while children in upper years use tablets and computers all day and then continue at home to complete homework.

Some are using computers for 10 to 12 hours a day, he says.

The study found 50 per cent of eight-year-olds have screen-time exposure of more than two hours a day, while 80 per cent of 16-year-olds have exposure of more than two hours a day.

Houghton says schools are adopting good practices such as a complete ban on use of social media, which is where he believes serious problems are emerging.

He warns that excessive social media use for teenage girls especially has a strong association with mental health problems.

Goodwin argues that while neurological studies are still collecting data, it is clear that computers are changing teenager and adult brains, and as younger brains are more malleable, similar results for children are very likely.

She says the problems stem from the failure of schools to provide teachers with the training they need.

“My big point is it’s not about the tablet, it’s the teaching and pedagogy. The tablet is an amplifier that has to be accompanied by professional development of teachers,” she says.
Asked if this is happening, she says: “Sadly, no. There are few schools who are considering the professional learning needs of staff.

“A lot of schools see iPads as a cost-effective measure to implement technology.

“It is quite affordable, but then it is the professional development that is omitted. That is the critical point.

“All the evidence shows it is a tool. It is only as good as the person driving it,” Goodwin adds. “It is touted as a silver bullet, but only if it is used the right way.”

Greg Swanson, the eLearning senior project officer with the Catholic Education Office in Sydney, says the rollout of this technology is very much a “local issue” for each school and his office is simply playing a supporting role.

Swanson says parents do have concerns about the use of tablets and often cite research that supports their concerns, but he can cite 30 papers that outline its benefits for enhanced learning.

The research “just starts arguments”, he says. He emailed The Australian links to a dozen papers.

Surveys of parents indicate that 70 to 80 per cent are in favour of using the technology, he says, but that still leaves about one in four parents who have concerns.

Geoff Newcombe, the executive director of the Association of Independent Schools of NSW, says there can be “difficulties for schools in convincing parents of the benefits of such a strategy”, and this is why parents need to be involved in the decision-making process around which device is the best option.

Newcombe agrees with Goodwin’s point about the ability of teachers being critical. He says teachers need to be familiar with the devices and platforms so they know the tasks they are setting can be completed by the students.

Swanson says the key issue is how the schools use the technology. Active rather than passive use of tablets is the watchword for effective use of devices in schools, he says.

He now spends a lot of time in classrooms where he has seen the way the devices can “re-energise” children who aren’t very interested in learning, especially boys.

“You can see the spark in the kid’s eye, that bit of fire that’s burning again around learning maths,” he says.

In the days before tablets, there used to be two ways of excelling at school — academically and in sport, Swanson points out. Now there’s a third group of high achievers who have mastered technology.

Despite the benefits, some schools have backed away from the BYODD program because they have realised that they are not ready, he adds.
One of the really big issues is equity, both for parents within schools and for entire school communities.

The Sydney Archdiocese has “clearly stated” that if a family cannot afford to buy devices then the school has to work with the family to ensure that no child is disadvantaged.

But the solution for low-income communities is a vexed issue. In a 2012 report for the NSW government, Goodwin argued that the costs for schools would be significant, thus potentially driving greater inequality in society.

Newcombe points to the need for schools to have an “ICT integrator” to collaborate with teachers on using technology in the classroom, while schools also had to ensure that their network technology is reliable, he says.

“It’s a really good question that we continue to struggle with. No one has an answer for that,” says Swanson.