

# DTiF

Digital Technologies in focus

Initiative of and funded by the Australian Government Department of Education and Training

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## Transcript of teacher reflection interview

### Sarah Atkins with Janet Haigh of Green Hill Public School, NSW

**Sarah Atkins:** Sarah Atkins is with Janet Haigh at Green Hill Public School.

**Janet Haigh:** The aim that we originally started with was to look at developing communication strategies and using technology around communication. And from that initial aim we now have a totally new aim looking at improving computational thinking through the use of the digital technologies, and looking at ways we can use computational thinking across a lot of our key learning areas and activities in the school.

Well, once we decided to change the focus to computational thinking, we did a lot of work with yourself around what we needed to do and looked at ways we could incorporate it. And we had to shift the thinking away from staff and students thinking that was only using technology. We started doing a lot of unplugged activities and ways to incorporate computational thinking and especially the use of algorithms into day-to-day stuff without needing to have a computer or an iPad or a Bee-Bot or something like that. So that, I think the main strategy is that unplugged and just incorporating it at a basic classroom level.

It has been a challenge using the computer devices because of some behavioral issues and so getting the students into routine is really important and that unplugged aspect of the curriculum really suits that purpose. We have had to really look at, we have a few children with some really high-need behaviour support needs that we have to be careful in how we're using technology, how often we're using technology because some of them do get really addicted to just being on computer games. So, we can go quite some time without the kids actually using the computers or the iPads, if those children are not having a good week. So we've had to find lots of inventive, hands-on ways that we can use the computational thinking. But that in itself, the unplugged activities, have actually been very good for those children with escalated behaviours because some of them are actually, they like a sense of patterns and logic and they like things to be black and white, so that actually helps support them in activities as well.

Last year we had some major community issues and sorry business issues that have impacted upon all the students in the school and still, are still affecting certain families within the school, in that we have to be respectful around the ways we teach and the way we do certain things during that period following those things.

Another challenge is the fact that we do have a, I would describe it as a transient population. Whilst we have 30 students, we have a core group of students that have been here since

Kinder but we do have a lot of movements of children into the school and out of the school that changes over quite regularly every year. So sometimes you feel like you're starting from the beginning all over again, even though you're working in the primary classroom.

Resourcing is also an issue, especially with one class being in a demountable that's quite old and ... severe lack of power points and outlets and stuff like that. But we have now addressed all of that.

And one of the challenges too is changing the perception of what technology actually is like amongst the children and the community and the parent group – that they're not just playing games on iPads; they're actually using tech, when they're doing hands-on technology, that it actually is a powerful learning tool.

One of the pleasant surprises for me was when we started looking at Digital Technologies and we had a STEM share kit, which is provided by the New South Wales Department of Education, there was lots of hands-on use of the Bee-Bots and the Dash and Dots, and we had Spheros as well and it was very actual hands-on, technology based. And I was concerned that, we didn't want it just to become like a novelty plaything and, as well as that, the fact that we do have students whose behaviour issues mean that we can't always use those resources. We started to look at ways that we could do more unplugged activities and more hands-on and we started looking at inventive ways that we can incorporate that across all the key learning areas, because a lot of people just associate digital technology with the science syllabus, so as we actually started to incorporate it, Digital Technologies and computational thinking actually became a far more powerful tool in our literacy and numeracy work than in other aspects of science and stuff like that. So I think that was one of the best surprises, is the fact that it's become such a strong tool in those areas, and for example in literacy we're doing sequencing of story in Kindergarten, we're doing story mapping, we're using say a 10 by 10 grid in PE and doing bean bag games, and the example of, I think you taught it to us, about going on a bear hunt and the children have to plan the route on the bear hunt, and we tie that to our geography. We actually drew plans of the school and then put a grid overlay and then with the older class and then they had to draw up instructions for how to move from this point in the school to that point in the school, which was a really interesting activity. So I think the bonus that it's been in literacy and numeracy and building those skills is perhaps the most positive surprise that's come out of it.

I think we've had a huge growth in student and teacher capacity around the Digital Technologies knowledge and skills and I think the thing that I really found impressive is that the whole language of the school has changed, like the example I was talking to you earlier about, I was talking to the primary class about learning their spelling words and because I'm working in that room at the moment I said, 'On Friday we're going to have our spelling words.' I said, 'I'm going to give you a secret code and then you have to work out your spelling words', and one of the students straightaway went, 'Oh, is that an algorithm?' They instantly tied the code to having an algorithm from that whole digital technology thing, and we're actually exploring; I'm going to get them to explore ways that we can use those sorts of codes and things to maybe spell our words and things like that. So I think the big change in student capacity is that knowledge and understanding of coding algorithms but also the fact that their language is really, really changed.

The teachers are just absolutely running with the idea of programming and using that knowledge that they now have and strengthening our literacy–numeracy programs, which are really big focus, with the Digital Technologies and with the computational thinking and stuff like that. So to me that's a huge change in student and teacher capacity.

And one of the things, looking at evidence, that really thrilled me was, since I've become principal I've looked at having a student leadership team rather than school captains and at the end of last year I worked with the older class and I said, 'We're going to pick eight areas of the school that we want to improve and we're going to develop strategies', and one of the big areas they identified was technology, and in years gone by children would say, 'We need more computers, we need more iPads, we need more apps on the iPads' – all of a sudden we've got this team of about eight or 10 kids talking about: 'We need to start getting stuff that we can do algorithms and that we can do this', and they're talking about, 'Can we allocate X amount of dollars?' They're even naming dollar figures, which I thought was really funny. 'Can we allocate a thousand dollars from the school budget and get some Bee-Bots?' And then someone said, 'Oh, well, we need something more than Bee-Bots, why don't we get some Dash and Dots?' They were problem-solving around what they thought were the technologies that would work in our school for what they want to achieve, and they were also actually helping me plan budgeting and stuff like that. So, to me, that's fantastic evidence.

I think for me, being someone who's been teaching for a very, very, very long time, initially when the school started on this project under our previous principal, I was, I probably still had the blinkers on thinking, *Oh, well this is going to sit within the Science and Technology syllabus and that's all*, and I think, as we've gone through this process of exploring unplugged opportunities and different ways we can use the technology, my perception is that it's actually a really powerful tool that can be used effectively across all the KLAs in all sorts of ways, and it's just been phenomenal, as I said, in supporting our literacy–numeracy and promoting those achievements.