

Navigating towards Digital Technologies at Montagu Bay Primary

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A conversation

Tracey Smith has been the information technology lead teacher at Montagu Bay Primary for three years. The school has 336 students, and an ICSEA of 1062, making the catchment community close to the Australian socioeconomic and locational mean. Her 4-day working week includes one day as a classroom teacher for a mixed Year 5/6 class; 40 minutes per week with every other class in the school, and school contact for My Education (a Tasmanian Department of Education initiative culminating in careers planning pathways).

Tracey's story commenced with an observation: that students in the school were allowed to play on the computers each morning before classes commenced. Each of the six desktop computers in each classroom was often surrounded 'knee deep' with watchers, as the operator battled monsters and otherwise engaged in video games. This observation sparked a discussion with the principal about children being 'consumers' or 'creators' of digital content. The discussion spiralled out to the rest of the teaching staff, with a consensus being reached that there was a need to change the school culture to students becoming 'creators'.

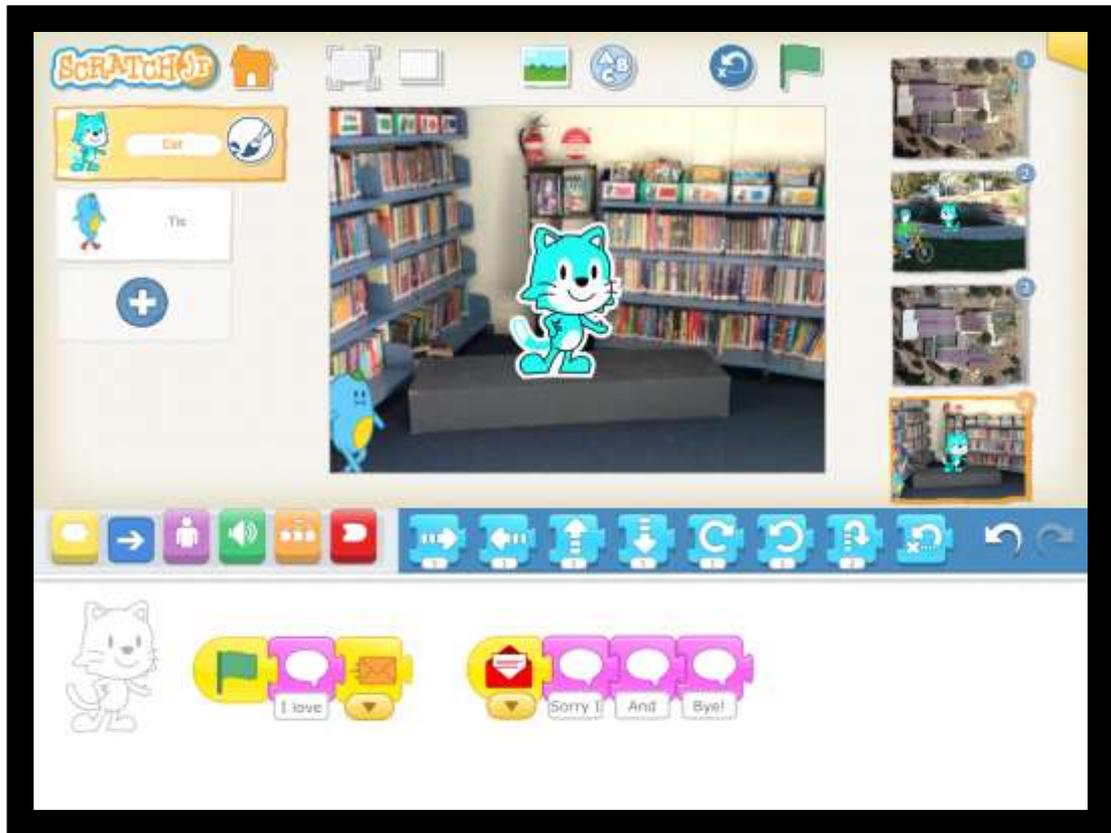
As a result, computer use before morning class was curtailed, and restricted to teacher initiated activities. Consequently, children became more active outdoors, and this was seen as a useful contribution to health and well-being.

Tracey firmly states that her long term goal is to enable students to become independent creators by the time they move to high school in Year 7. That goal will be achieved when students exhibit the capacity to visualise the desired outcome, articulate the pathway and product for achieving it, and be able to select and operate the appropriate software tools to create that product.

Some of the activities Tracey currently undertakes with her classes as IT lead teacher indicate how she is working with this community to engender this long term goal.

For instance, in 2016, she used a photograph of the school and its grounds as the basis for a Scratch Jr project. "In the Around Our School task, I challenged our Grade5/6 students to create a tour of the school that showcased two different areas. We were limited by the four pages allowed in Scratch Jr as backgrounds. They needed to photograph the two areas to use as the backgrounds for each section of the tour and return to the map each time. They were strongly encouraged to have their characters follow the paths and hallways that we would use if moving to each of the areas they chose rather than magically moving through walls. As the image was a bird's eye

view, this was challenging for some”. At one point a small group showed Tracey their draft product. “But you’ve walked through a wall”, she said. So the group had to re-design their program to eliminate this bug in the code.



In addition to the six desktop computers per class, and several sets of mini iPads, the school has two laptop trolleys and a BYOD policy. This diversity of platforms can create division or natural divisions, depending on your point of view. Classroom teachers have exclusive use of the laptops, and therefore they can run a full version of Scratch with greater capabilities than the Junior version Tracey uses on the iPads. At this stage one teacher has fully embraced the BYOD policy, forming a virtuous circle of intent and routine. Because that teacher deliberately assigns learning tasks which require computer use, the students have acquired the routine of bringing their computers to school, fully charged up and ready for learning.

Historically, a few gifted and talented students in the school have engaged with the state-wide extension project ‘SmartBots’. Under Tracey’s supervision, six students build robots using Lego Mindstorms kits, and program them; sometimes with a view to competing in the Junior RoboCup competition. Encouraged by this, she finagled a budget allocation to purchase 20 Edison robots [about \$64 each, bundled with spares & batteries etc.] at the start of Term 2, 2017. This has given her the opportunity to work with an entire Year 5/6 class on robotics. This has been incredibly stimulating for the students as they work through the challenges in the accompanying workbook. Sound activation (with a handclap) has been tried. Some students sit back, but Tracey mixes genders and encourages class-wide participation by having ‘explain time’ where she chooses which student will talk about the strategies at the end of the lesson.



Which brings us to the delicate understanding of the difference between ICT (as a general capability) and the new Digital Technologies subject of the Australian curriculum, as interpreted in this school context. Both depend, in Tracey's eyes, upon teacher confidence. She is personally 'frightened' at the idea of becoming the school Digital Technologies specialist teacher. But on the other hand, Tracey senses and respects a similar concern amongst her colleagues as well. Sensitive to this, the principal has asked Tracey to make a comment on behaviour and effort for ICT capability for every student in the school this year. By 2019, the school is mandated to report on Digital Technologies with A-E grading and a comment for each student. That may seem a long way off, but Montagu Bay has started its journey in a very positive way!