Using Robots and DigiTech to foster Social Emotional Learning

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Meet Cozmo. He is the newest personal companion robot to hit Australia. Cozmo is eight centimeters tall and 9 centimeters long. He looks like a cross between Wall-E and EVE from Pixar. He might be digital, but he is a member of the newest innovation: digital pets. And he can be used to teach social skills, responsibility, and literacy. In fact, much of the new Digital Technologies curriculum, which is about twenty-first century thinking, teamwork, and project management skills, can be easily adapted to suit students with special needs.

The new Digital Technologies curriculum in the Australian Curriculum expects teachers to incorporate more coding, problem-solving, and deep-level thinking tasks in their lessons. This initially seems like a difficult task, but there are many ways teachers can link their current lessons to the new curriculum. For example, reading/sorting/making a visual schedule is just one example of coding and sequencing that meets the new standards.

And many schools are already incorporating Beebots, Spheros, Ozobots, Lego Mindstorms, Makey Makeys, and Osmo into their teaching. These wonderful technologies are just the start of the new Digital Technologies curriculum and there is something for all ages and abilities.

Further, the newest innovations (3D printing, Makerspaces, and robotics) are providing opportunities for students to build their social and emotional skills. Cozmo, as mentioned above, is controlled by an iPad/iPhone app. Cozmo has his own personality and he talks and sings. Every day you are expected to wake Cozmo up, “feed” him, play games with him, and perform maintenance tasks to keep him “fit”. The games can feature one or two students playing with Cozmo at a time, perfect for learning turn-taking and socialization skills.

Thus, we have a very interesting future ahead of us where robotics incorporates a wide variety of learning opportunities.
This presentation will review the new digital technologies curriculum and offer practical advice how to: 1. Modify it for students with special needs, 2. Differentiate it for a wide range of physical and cognitive abilities, 3. Incorporate it into literacy and numeracy lessons, 4. Offer a variety of examples and samples – many of which are paper-based and do not require technology, and 5. A preview of Cozmo and some other new robotic and coding technologies that could be included in the special education classroom. My research is based on game-based learning and the theories of active play (Piaget) and social constructivism (Vygotsky).