

How technology could motivate children to explore nature

7 October 2014, by Hannah Jenkins



Boys collaborating as part of Cumbo's research. Credit: Bronwyn Cumbo

Childhood today is a very different experience to what it was 50 years ago. Gone are the days of exploring the local creek and returning home for dinner at sunset. Parents' concerns about stranger danger and traffic are keeping children indoors, playing digital games during their free time.

"Digital technology is often considered a barrier to independent outdoor play," says PhD candidate in the Institute for Sustainable Futures Bronwyn Cumbo, "but it could also be an important tool for change.

"I'm working with children and parents to see how interactive technology may enable and motivate children to play more regularly in their local natural places."

Health benefits aside, studies show adults who regularly spent time in nature as children care more for the preservation of natural areas than adults who spent their childhood in cities.

Cumbo's research suggests the cultural shift

required to develop a greater affinity for nature is closely linked to the level of independence children have when visiting [natural areas](#). Children who design and direct their own play experiences in nature seem to have a greater understanding and confidence in natural environments than children who visit under close supervision.

"This research is about taking a positive and creative approach to tackling an environmental issue," explains Cumbo.



Child's artwork created in one of Cumbo's research workshops. Credit: Bronwyn Cumbo

"Many kids love [digital technology](#) and games. I'm interested in how the engaging aspects of digital games – the narrative, characters and creativity – can be used to entice children outdoors for a fun and tangible experience.

"Technology might also be designed to address some of the barriers to outdoor play such as the safety concerns of parents."

Cumbo's affinity with nature is evident in her previous work in marine pollution research, science communication and threatened species

conservation. She is passionate about how the freedom and unpredictability of nature can inspire and challenge children.

Initially, Cumbo's research involved working with children and their parents in Aalborg, Denmark for six months. Using highly collaborative Scandinavian approaches to technology design with kids, she has built the scaffolding to continue the research in Australia.

"I held creative workshops in Denmark with children aged eight to 12 to understand what inspired them to play outdoors in nature. To explain the task, I created a fictional narrative about two virtual characters, Anna and Jesper, who had escaped their virtual world to experience the physical natural environment."

The children were asked to design the ultimate [outdoor play](#) experience for these characters in a local natural area.

"Interestingly, there were no adults in any of their designs and they gave the characters exciting challenges and games that incorporated role-play or risk-taking."

Cumbo says knowing what motivates children to play outside is the first step towards co-designing relevant digital tools and solutions.

"I'm now working with a group of parents and kids in Sydney to design digital tools that will build supportive communities of families around existing natural spaces," she says.

"If we encourage children and parents to connect more regularly with their local nature and view technology as an enabler instead of a barrier, there's potential for them to become more familiar with the shared natural spaces around them, and more willing to let their [children](#) explore and play more freely."

Provided by University of Technology, Sydney

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