



# DEVELOPING IN DIGITAL WORLDS

Findings from teachers in early childhood education

Phase One  
2015-2017

## Project Overview

- Developing in Digital Worlds is a four-year project conducted by the University of Auckland's Faculty of Education and Social Work and funded by the Ministry of Business, Innovation and Employment
- This is the first study in the world to identify links between teaching, family participation and game-based learning in order to promote educational outcomes and equity
- The project focuses on children aged 4-17 years to test how to promote cognitive and social development in the '21st Century' digital world

## Study Aims

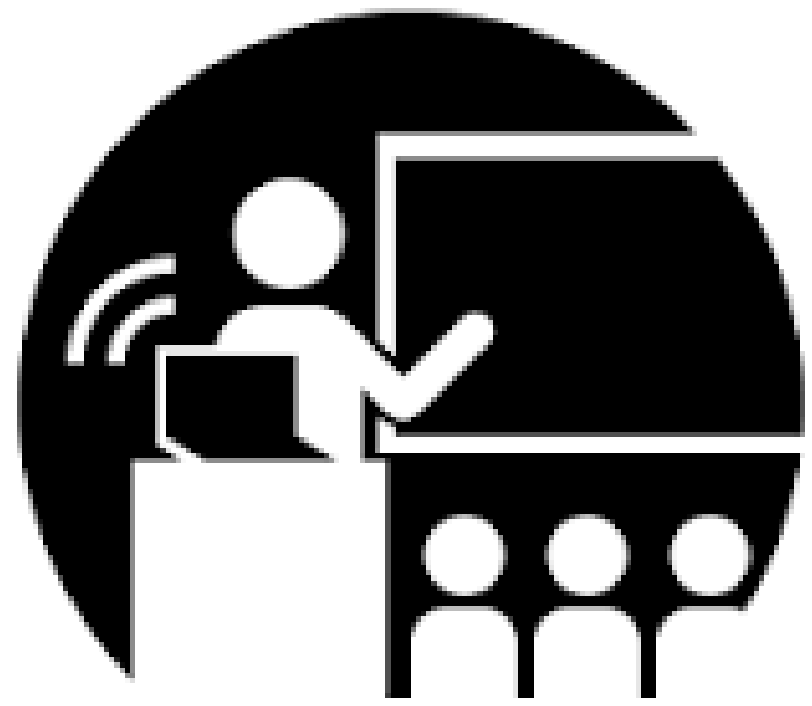
- How does participation in the digital world influence children's cognitive and social development?
- What skills, knowledge and capabilities do children need to manage, engage and benefit from participating in the digital world?
- How can family, educators and society effectively support children's involvement in the digital world?



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# TEACHER QUESTIONNAIRE RESPONSES



- 14 teachers participated
- 11 years average teaching experience
- 6 years average experience in digital practice
- 4 early childhood centres, which were a mix of English language and bilingual centres

## Digital Devices

computer  
netbook  
tablet  
ipad  
smartphone

## Skills

self-regulation  
positive social skills  
collaborative reasoning  
critical thinking  
critical literacy

## Teaching the skills in general

- All of the teachers said they organised a variety of teaching activities to support children's learning of the above cognitive and social skills



79%



- Most of the teachers (79%) organised group activities and discussion to help children develop positive social skills

- No teacher mentioned organising teaching activities to develop children's critical literacy, collaborative reasoning and attention focusing skills

## Use of digital devices

- All teachers were positive about digital devices adding to their teaching practices
- More than 80% of teachers thought that digital devices provided more opportunities, particularly for critical thinking and collaborative reasoning

80%



- But a number of teachers thought that digital devices did not provide further opportunities or even reduced opportunities to practice positive social skills (43%), self-regulation (21%) and critical literacy (21%)

## Three teaching methods

The teachers reported using three teaching methods:

- explicit teaching
- indirect teaching
- modelling



## Frequency of using digital devices

- 36% of teachers reported using digital devices daily to teach children's critical thinking, critical literacy and positive social skills daily

36%



21%

- 21% of teachers said they never used digital devices to teach collaborative reasoning and self-regulation

Thank you to all those  
who contributed  
to this research.

## Key Implications

- Social and cognitive skills are important to children's development and valued in Te Whāriki. Teachers generally reported teaching them, mostly the social skills, using different teaching approaches.
- Teachers had mixed views about whether and how digital devices could help promote these skills, especially the social skills.
- All teachers expressed an interest in learning more about how digital devices could be used, which suggests a need for professional development in this area.
- Teachers reported different amounts of teaching using digital devices, with fewer than half reporting frequent use. This also suggests a need for professional development and also highlights possible issues of access.

## Where to next?

We encourage you to discuss these findings with your colleagues at your early childhood centre. Your collective understanding of the research will help advance the knowledge of children's digital skills and how children benefit from whanau support.

We will be sharing our findings with the Ministry of Education, among others, and suggesting how digital skills can be linked to Te Whariki, the New Zealand early childhood curriculum.

## More Information

If you have any queries, you are most welcome to contact the project manager, Angela McNicholl, at [a.mcnicholl@auckland.ac.nz](mailto:a.mcnicholl@auckland.ac.nz) or 09 923 8978, or email the principal investigator Professor Stuart McNaughton on [s.mcnaughton@auckland.ac.nz](mailto:s.mcnaughton@auckland.ac.nz)

Visit the Developing in Digital Worlds website to find out more:

[developingindigitalworlds.blogs.auckland.ac.nz](http://developingindigitalworlds.blogs.auckland.ac.nz)



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