

Inclusive Teaching with Technology: Pedagogical Possibilities in Play- Based Environments



The Team

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Purpose

To explore the question, “How do children who are English language learners or who have special learning needs explore, document, and share their thinking with open-ended iPad apps in play based kindergartens?”

Context

- Full Day Kindergarten in two large urban school boards in Ontario
- Six core day and 8 before & after kindergarten classrooms
- Play-based programs
- RECE and OCT teaching teams
- Open-ended iPad apps

Literature Review

- When used intentionally, new digital literacies can help educators teach students to question, construct theories, and develop the skills needed for active global citizenship (Wimmer et al., 2012).
- Using open-ended tablet applications gives children access to photography, video, audio, clip art, etc. for multimodal communication (Rowsell, 2017)

Literature Review

- Using iPad apps with children with Autism Spectrum Disorder and limited verbal interaction increased the amount of their communication and made communication faster and easier (Flores et al., 2012)
- English Language Learners have cognitive benefits when given opportunities to use their home language in the classroom (Nicoladis, et al., 2016)
 - Open-ended, multimodal iPad apps support home languages

Methodology

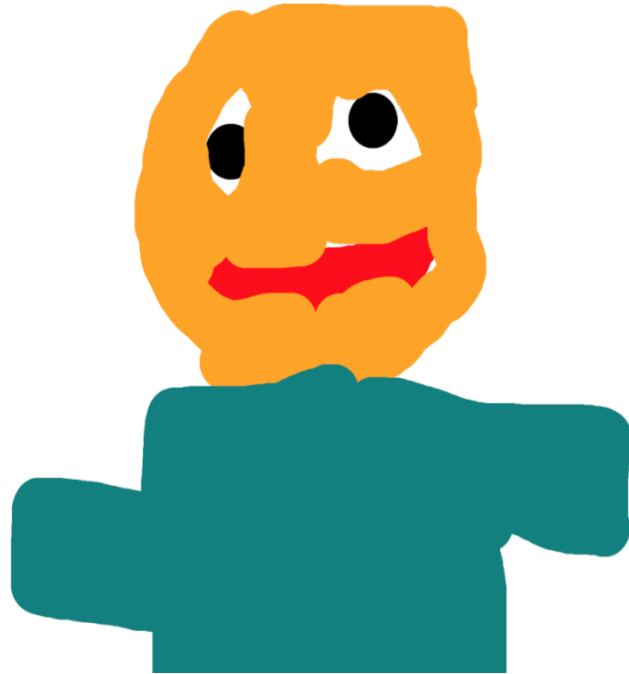
- Qualitative study (2015/16 - 2016/17)
- 14 kindergarten classrooms in Ontario
- Registered Early Childhood Educators and Ontario Certified Teachers

Methodology

- Bi-weekly classroom observations, annual interviews, questionnaires, and focus groups
- Children's archived slideshows were analyzed



Findings



ELLs Practice and Consolidate Their Language Skills in English and Home Languages

- Omar's tower



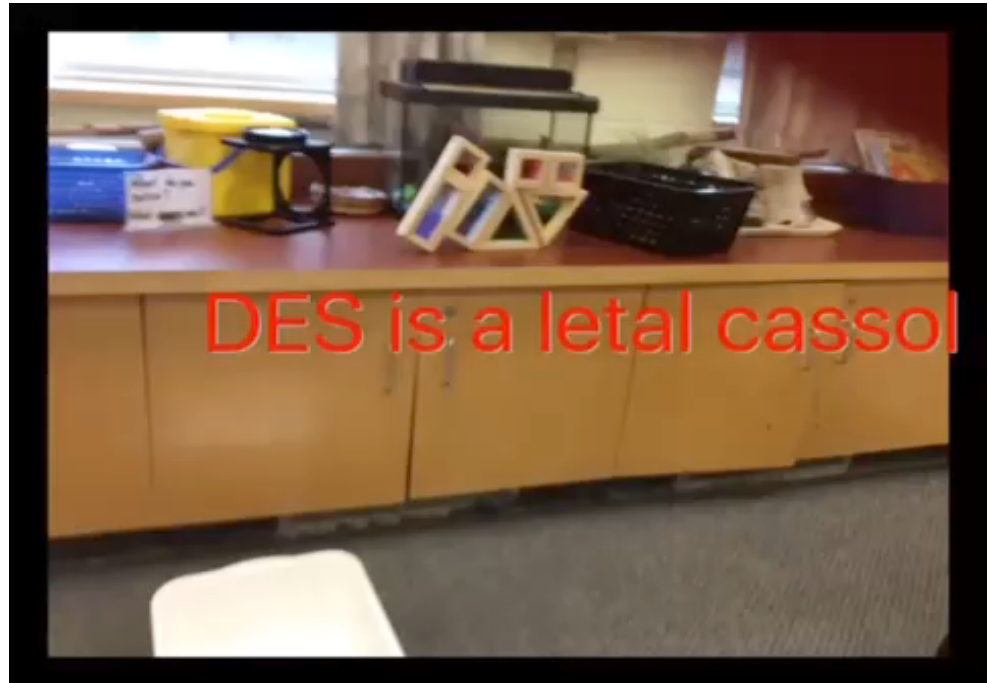
ELLs Communicate Their Ideas and Showcase Their Skills

- Farah's song



Apps Provided Opportunities for Children to Become Integrated into the Classroom Community

- Arif's castle



Educator's Reflection

Just seeing some of the kids that wouldn't normally explain their thinking so well, they were really stopping to think now after they did something, "What did I do?"...even if they were too shy to maybe explain it or they couldn't get their thoughts together in a class setting, they could use the iPad and talk about what they did. The ones who didn't have much English they could still say little things that were helpful in explaining their thinking...And it built their confidence for sure.

(Kindergarten Educator, June 2017)

Children with Special Learning Needs Overcome Barriers

- Aisha's artwork



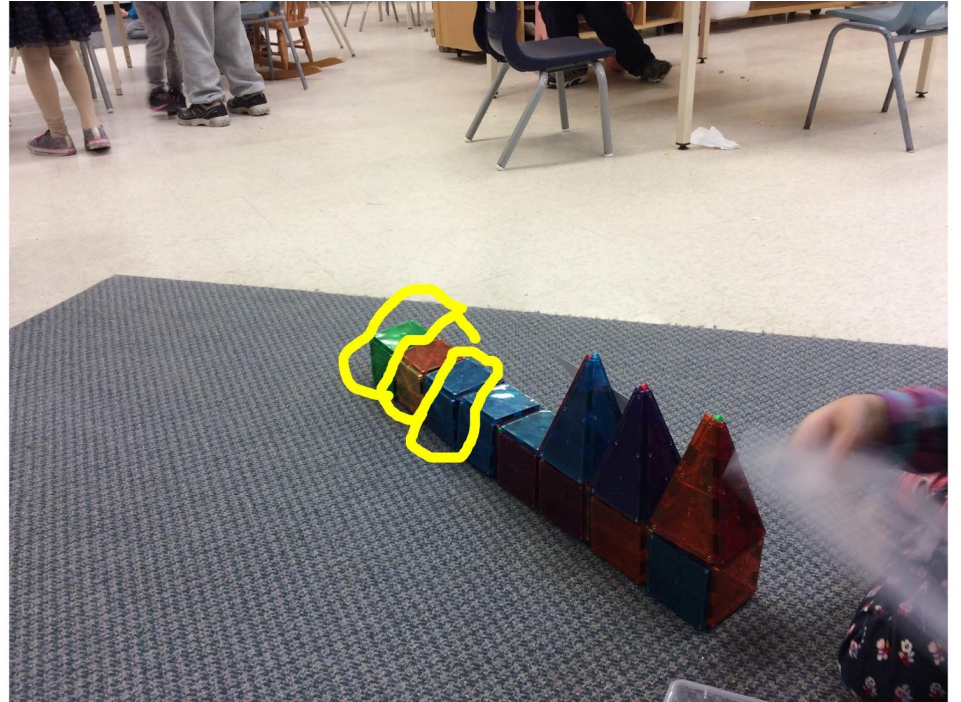
Multiple Modes Allowed Children to Communicate Using Their Strengths

- Kabir's Star Wars scene



iPads Supported the Integration of Children with special learning needs

- Eric's train



Educator's Reflection

With Connor, I noticed that it gave him the self confidence, it gave him the ability to have a voice and to be able to be creative and problem solve in his way....although he has autism, one of the things I realized with him was that he was so afraid to do something, he was afraid of failure...[with the app] he can just delete and start over again...when he has drawn a picture...you can see his face, he's beaming because now he has a voice.

(Kindergarten educator, June 2017)

Barrier or Bridge?



Educator's Reflection

I think [the iPad app project] has been really effective. There are a lot of quiet kids that we have in the class that wouldn't always come and tell you...what they've done. And then you realize that they've made a six-minute long recording about something they've made - and with excitement. And all these words that you are like, 'Oh okay, so you do talk about your stuff a lot'. But sometimes I guess maybe being by themselves with the iPad they are a little more confident than talking in front of everybody else as a whole group.

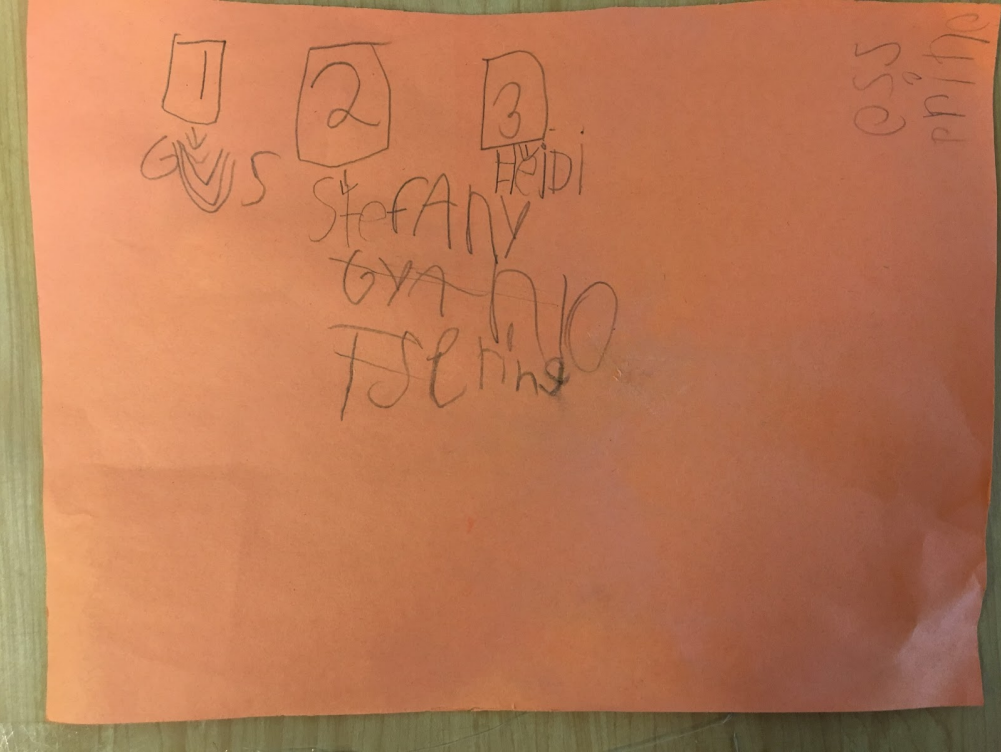
(Kindergarten educator, June 2017)

Challenges

- Environmental challenges
- Social challenges
- Technical challenges
- Developmental challenges

Challenges

- Turn-taking
- Children's need for support



Benefits

- Window into childrens' thinking
- Opportunities for all children to foster skills in many domains



What have the educators been doing?

Educator Strategies - Logistics

- Have the iPads charged and accessible on a table or counter
- Place $\frac{1}{3}$ of the children's names on each of 3 class iPads
- Place iPads intentionally in particular areas of the room to inspire use
- Encourage children to go to peers for help

What have the educators been doing?

Encouraging Deeper Exploration

- Suggest children document their work and audio-record explanations
- Interview children about their work using the open ended apps
- Suggest children interview each other
- Suggest that children photograph the environment and draw on the photos
- Introduce reflective questions (ie. What was your favorite part?, What was challenging?)

What have the educators been doing?

Inspiring sharing and collaboration

- Suggest a new child videotape themselves talking about their interests, and then interview other children about their interests in order to integrate them into the classroom
- Encourage children to share their digital documentation at group time
- Suggest that children who are more comfortable working privately document their learning using the apps alone and then share their slideshows with others
- Encourage collaborative work on the iPads

What have the educators been doing?

Expanding forms of documentation and representation

- Encourage children to sound out words for pixabay searches
- Challenge children to photograph creations or the environment from different angles/perspectives
- Suggest that children record their activities as well as creations (ie. dramatic play, music video)
- Encourage storytelling within the app (drawings/photos and audio/text)
- Bring the iPads outdoors to document creations, events, excursions or activities

Conclusion

Open-ended tablet applications offer alternative visual and auditory tools for English Language Learners (ELLs) and children with special learning needs (SLNs) to:

- Communicate their ideas
- Engage with others, and
- Demonstrate and develop their knowledge and skills

Conclusion

Educators must be intentional in their choice of apps, as well as in the strategies used to ensure that all children benefit.

Contact Information

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Please visit our website:

<http://gbcresearch.ca/project/toys-or-tools/>