

Touch Screen Technology: Young Children, Apps, & iPads

**Ready to Learn Initiative: Using a Transmedia Approach
to Enhance Early Literacy and Numeracy Skills.**

Michael Cohen Group LLC, Evaluation Team, Project LAMP & Project UMIGO
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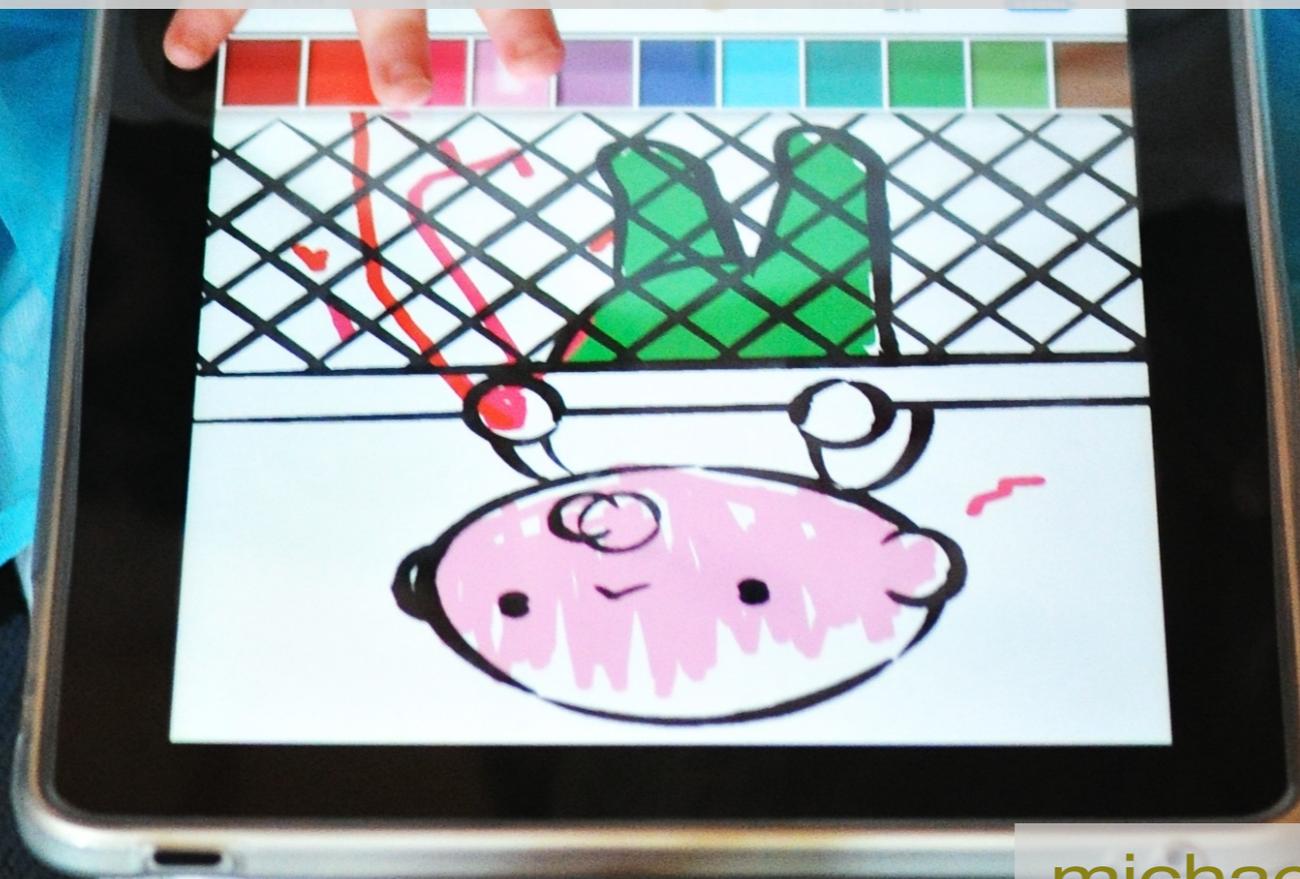
Background

- Michael Cohen Group LLC (MCG) is evaluation partner for two RTL grants, Project UMIGO* and Project LAMP.**
- MCG is responsible for all formative research (to inform creation of transmedia educational properties) and summative research (to assess educational impact and effectiveness).

*Project UMIGO is a consortium of WTTW Chicago Public Media, W!ldbrain Entertainment, & MCG. **Project LAMP is a consortium of Hispanic Information & Telecommunications Network, Callaway Digital Arts, & MCG.

Objective

- Study young children's (2-8 years old) use of touch screen technology (TST) and apps to provide knowledge to Project UMIGO and LAMP content creators.



Method

- A two-phase qualitative study with 93 children and 93 caregivers, primarily from low income families representing the full range of race/ethnicity.
- Phase One (2011): 2-8 year-old children (N=60) and their caregivers (N=65).
- Phase Two (2012): 3-8 year-old children (N=33) and their caregivers (N=28).
- Qualitative design: In-depth individual interviews & observations with children; Questionnaires & focus group interviews with caregivers.

Children's Use of Touch Screen Technology (TST)

- Child Factors
 - Previous Experience with TST
 - Age/Developmental Level
- App Design Factors
 - Formal Features
 - Types of Apps
 - Game Play Design

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Previous Experience



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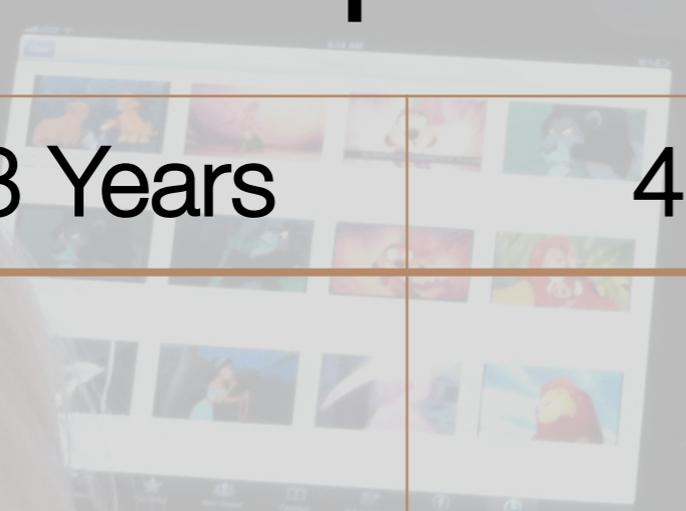
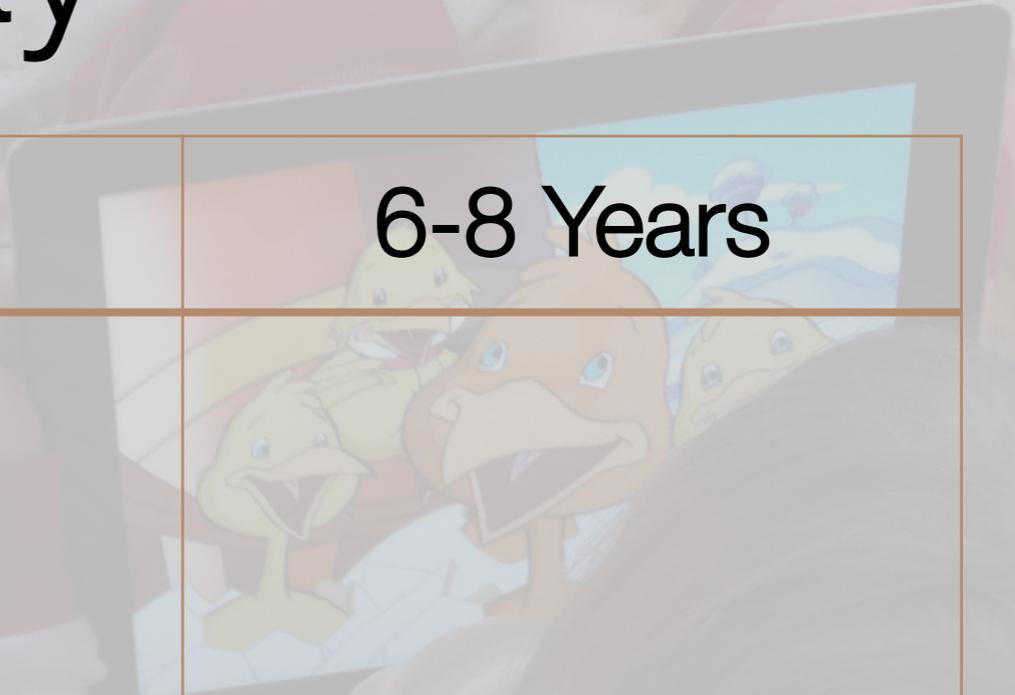
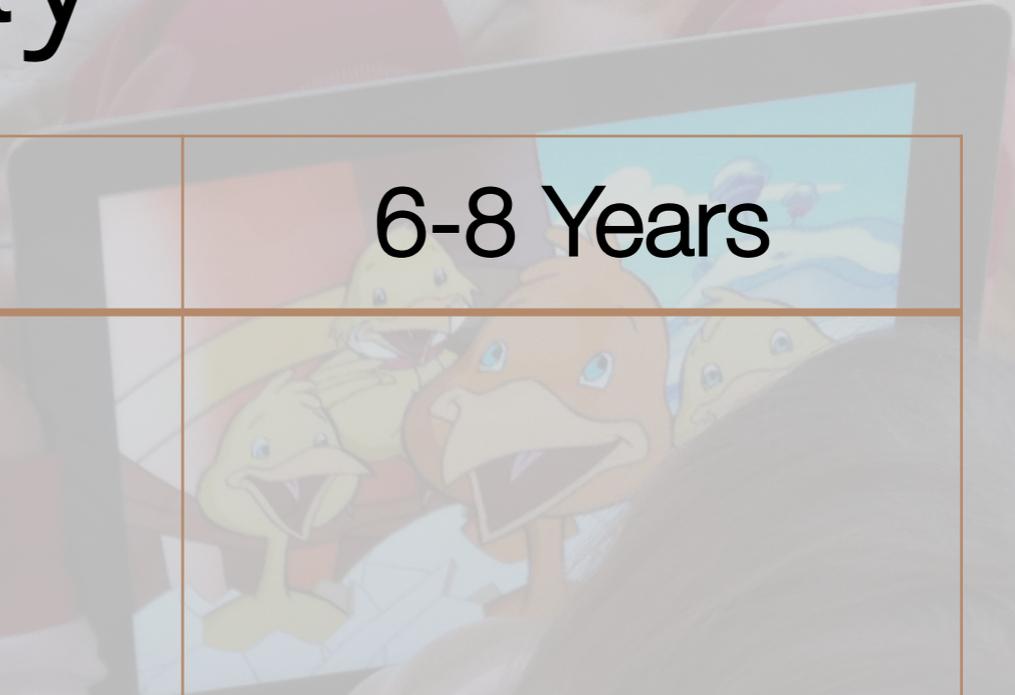
Age/Developmental Level

	2-3 Years	4-5 Years	6-8 Years

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Motor Skills			
Approach to Exploration			
Concept of Play Skills			
Generalization			
Preferences for Activities & Design			
Grasp of App Interface			

Concept of Play

2-3 Years	4-5 Years	6-8 Years
		

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Concept of Play

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Formal Features of Apps

NARRATIVE

CURRICULUM

GAME PLAY

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Types of Apps

- *Storybook* apps: Reading or listening to a story with playful features and activities.
- *Creating* apps: Provide tools, workspace, & activities (e.g., cupcakes, robots, painting, etc.).
- *Gaming* apps: Activities include a range of challenges, actions, & reactions that lead to achievement as levels are mastered.

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Gaming Apps Design

- Factors that facilitate successful game play:
 - Appropriate challenges and sequentially progressive leveling.
 - Child subjective experience of independence and “doing it myself.”
- Barriers in game play include:
 - Difficult user interface,
 - Obscure game objectives,
 - Lack of reward or feedback.

Notes

- Children are enthusiastic about using iPads, but the device does not guarantee engagement and learning.
- Importantly, children engage in a personal-best competition rather than win-or-lose.
- Extraordinary changes in app design were observed from Phase One (2011) to Phase Two (2012).

Strategic Implications

- TST and apps offer an accessible and meaningful media platform for children as young as two years of age.
- The app interface is critical; the platform needs to be intuitive to easily afford access.
- Children require age-, experience-, and developmentally-appropriate content.
- Analytics available to the child-user offers extraordinary educational promise by providing an ongoing progress report and appropriate leveling.