



# SPEVI

South Pacific Educators  
in Vision Impairment

## Australia

SHINING THE LIGHT ON VISION EDUCATION

# 2017 CONFERENCE

BRISBANE 8TH - 12TH JANUARY



# Touch, Flick, Learn: A Hands-on Approach to Technology Education for Young Students with Vision Impairment

Phia Damsma, Sonokids Australia



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# Setup of Presentation

- The T in STEM, and when to start
- Ballyland apps
- Touch gestures for VoiceOver on iPad or iPhone
- Required fine motor skills and support recommendations



# Technology or Digital Skills

- Importance of STEM
- Early Learning
- Inclusion
- Equity



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# Ballyland

- Introducing Ballyland series of accessible technology-teaching software
- Hands-on
- Gradual building of skills
- Safe and fun learning environment
- Confidence



# VoiceOver

- What is VoiceOver
- Concepts and contexts



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# VoiceOver – Self-voicing

- Apps simulate VoiceOver
- Specifically tailored to the needs of young children who are blind and who are novice users of a mobile touch device
- Skills such as fine motor skills and listening skills can be gradually built
- The element of risk is removed: wrong gesture = no response
- Learning is hands-on, step-by-step, and in the child's own tempo
- Real voices, child friendly, entertaining



# Gestures in apps

- Stay Still Squeaky
- Ballyland Magic
- Ballyland Rotor



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# Shape of Gestures

- Can be made anywhere on the active screen
- Light and small
- Number of fingers, direction of the gesture, and speed determine successful outcome
- No right or wrong way of performing touch gestures, as long as they lead to the expected outcome



# Try some Gestures

- Tap
- Flick right with three fingers
- Rotor
- Double tap



# Limitations

- Gestures on the touch screen that are (too) big and heavy
- Possible limitations in fine motor skills of very young children, who need practice and support to develop these skills
- Supporting the child in developing and improving the skills for correct performance of touch gestures can commence before engaging with the touch device



# Support

- Fine motor skills, finger isolation, rhythm and tapping: musical instrument (keyboard, drums, xylophone)
- Exploring a space/surface with tactile feedback
- Spatial concepts (corners, top, bottom of the screen)
- Directional concepts (left, right movements)
- Tactile booklet
- 3D printed learning tool



# Building skills

- Confidence
- Explore and Practice in safe apps Ballyland Magic and Ballyland Rotor - in principle enable the use of a mobile iOS device
- Proper time should be allowed for the child to reinforce acquired skills through practice.
- VoiceOver Practice
- Transfer skills to another application that uses VoiceOver



# Plans

- New Sonokids apps for teenagers or adults to learn Voiceover skills



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- [www.ballyland.com](http://www.ballyland.com)
- Ballyland Magic and Ballyland Rotor are available from the AppStore

