WELCOME!
The iPod Touch, iPhone &/or iPad to Support or Enhance Fine Motor Skills

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In the field of AT for over 25 years
Works with students from K-12 and Early Intervention Program
1 year prior to entering school. All abilities. All AT.
Designs and teaches Graduate courses in Assistive Technology for Acadia University and St.Fx University
PhD Student University of South Australia

Presenter

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Apple Distinguished Educator 2011
Proloquo2go Certified Trainer
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Distinguished Educator
Janelle Knickle OT Reg. (NS)
Occupational Therapist
Graduated from Dalhousie University in 2007 with a degree in Occupational Therapy. Has been working with South Shore Health and collaborating with South Shore Regional School Board since 2007 working with students from grade primary to 12.

Robin Philp OT Reg. (NS)
Occupational Therapist
Graduated from Dalhousie University in 2006 with a degree in Occupational Therapy. Previously worked with the South West Regional School Board and Conseil scolaire acadien provincial (CSAP) until 2009. Currently working in collaboration with the South Shore Regional School Board.
What are Fine Motor Skills?

- The ability to make precise coordinated movements using the muscles and joints of the wrist, hand and fingers.
**Fine motor issues addressed by OT?**

- Strength and dexterity in hands and fingers
- Core stability
- Wrist control
- Shoulder stability
- In-hand manipulation
- Pinch/grip strength
- Arches in palm
- Range of motion
- Muscle balance and stability (thumb & pinky)
- Shoulder strength
- Joint stabilization
- Wrist flexion/extension
- Pronation/supination
- Separation of the sides of the hand

**How do fine motor skills impact learning?**

- Grasping
- Picking up items
- Releasing the item
- Imitating movement
- Copying patterns
- Holding a pencil or pen
- Writing
- Cutting
- Gluing
- Eating
How do fine motor skills impact learning?

- Problem solving
- Task completion
- Associations with school and learning process
- Self esteem
- Motivation
- Engagement

Fine motor skill development

- Children’s muscles develop from proximal to distal - the child gains stability in areas like their shoulder and shoulder blade before they gain stability of smaller muscles such as those in the hand.

- Infancy: i.e. Waving, grasping toy, looks at and plays with hands, reaches, drops, hand to hand transfer, puts toys down, picks up toys, bilateral coordination, uses a tool for a purpose.

- Crayon, spoon etc. used appropriately
- Scribbles (palmar grasp) etc.
• By age 2
  - uses tools with a fisted grasp and whole arm movements
  - moving from circular scribble to vertical scribble

Ages 3-4
- Hand dominance emerges
- moving from simple scribble drawings to copying crosses and triangles
- child can copy circles
- by age 4 the child should be holding the crayon with a tripod grasp

Age 4-5
- drawing movements are refined into more precise wrist and finger movement less elbow and shoulder movement.
- child can copy square

Age 5-6
- Tripod grasp should be fully established
- child progresses to being able to copy diagonal lines, triangles, diamonds

Fine Motor Skills in School

• Referrals in the school system originate with the Program Planning Teams at the school level

• Referrals to OT for reasons such as:
  - slow, sloppy handwork
  - poor letter formation (reversals, bottom up)
  - poor tool use (pencil grip, scissors, glue, colors)
  - overall poor fine motor skills

• OT is getting referrals after grade 4 for poor fine motor skills, but mostly pertaining to written output.

  - By the time the child reaches age 10-11 (grade 4-5) pencil grip is established (proper or not) and letter formation is ingrained and difficult to change. At this age if the child continues to have handwriting difficulties computer or iPod Touch/ iPad use for output is more appropriate than a remedial handwriting program.
Fine Motor Skills in School

- If a child is experiencing fine motor dysfunction, the iPad apps can be used AS PART of a comprehensive fine motor skill remediation program which includes strengthening the upper extremity from shoulder to fingers as well as individual exercises to promote finger dexterity, strength and coordination. Consultation with occupational therapy for a comprehensive assessment and program development is encouraged.

Fine Motor DOE outcomes examples

- GC 08: students will be expected to use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imagination

  9.1 create written media text using some familiar forms [e.g. lists, letters, personal narratives, retellings, messages, finger plays, drawings, puppetry]

  9.2 demonstrated beginning of awareness of audience and purpose

- GC 10: students will be expected to use a range of strategies to develop effective writing and media products to enhance their clarity, precision, and effectiveness.

  10.2 students would be expected to use some conventions of written language

  - Use drawings, letters, and approximations to record meaning
  - Develop the concept of directionality left to right; top to bottom
  - Establish one-to-one correspondence between spoken and written words
  - Begin to use spacing between words
  - Write complete sentences although they are not always punctuated correctly
  - Understand that letters can be written in a Bryn Mawr case forms but often tend to use them indiscriminately
Drag your video window here and resize.

Click on the bottom right hand corner of the video window and drag down to the right to enlarge your view.

1. Hold down your mouse on the Audio and Video window toolbar and drag the window down to the iPad on the whiteboard.

2. Click on the bottom right hand corner of the video window and drag down to the right to enlarge your view.

Dexteria
$4.99
Use with the iPod Touch, iPad or iPhone

• Therapeutic hand exercises supporting and enhancing fine motor skills and writing readiness in children and adults
• Tracking and data collection
• Hand exercises that support and enhance fine motor skills and writing readiness
• Promotes dexterity, finger sequencing, isolation and control
• Supports Handwriting Without Tears principles
• A stylus can be used for the writing portion of the app
• Pinch, tap, write
• Designed in consultation with OT’s
**Bugs and Buttons**

**Pinch and Grab**

$2.99

iPad use

- Creative imaginative play
- Pinch the tarantulas to the soft soothing music and drag them to the jar
- Requires thumb and index finger control, appropriate pressure onscreen and controlled drag to the jar, hand eye coordination, attention to task, task completion

- The activities progress into more complicated task sequences

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**Bugs and Buttons**

**Roach Racing**

$2.99

iPad use

- Two finger access sequentially on 2 targets to control the roach to get to the finish line
- Requires coordination of the two fingers in a rapid tempo
- Task increases in speed as the levels progress
Juno's Piano
Learn Songs, Play with Parents HD .99¢
iPad
- Teach children to play the piano
- Easy to use and apply
- Use bilateral access on the iPad
- Teach children to play the piano
- Finger isolation and control

Injini
Trace the Shapes
$29.99
Lite version available

- Move the ball along the track to complete the task
- Level 1: Vertical Lines
- Level 2: Horizontal Lines
- Level 3: Mixed Vertical and Horizontal Lines
- Level 4: Diagonals
- Level 5: Zigzags and Xs
- Level 6: Curves
- Level 7: Circles and Curved Shapes
- Level 8: Waves and Spirals
- Level 9: Polygons
- Use with a stylus to reinforce pencil tasks and enhancing writing skills
- Move the ball along the track to complete the task
- Level 1-9 follows the developmental sequence of pre-printing skills (simple-complex)
Touch and Write
Free
iPad

• Touch the screen with your finger or stylus and learn letters, numbers and words
• "write" with shaving cream, ketchup, lemon gelatin, pencil, chalk etc.
• Learn from 2 high frequency word lists
• Add your own word list
• Children can learn to write their names in a fun, engaging and creative way
• 28 different paper styles to choose from
• Use a stylus to engage users and to enhance handwriting skills, control, grasp, letter recognition and basic writing

ShapeBuilder
.99¢
Lite version available
iPod Touch, iPhone, iPad

• 146 puzzles
• Fruits, animals, letters, numbers…
• Employ visual motor skills
• Touch control
• Attention to task
• Task completion
• Fruits, animals, letters, numbers (recognition)
• Works on visual motor skills, and hand eye coordination
• Use of stylus to promote pencil grasp
• Index finger for finger individualization
**WritePad for iPad**

$9.99

*iPad*

- Handwriting recognition App
- Use with your finger or any stylus
- Converts handwriting to text
- Reinforce activities in Handwriting without Tears
- Write a letter on screen and see it convert to text instantly

**Cars2 AppMates**

*Free*

*iPad*

- Purchase your cars separately (Amazon etc.)
- Turn your iPad into a virtual play mat
- Go on journeys in your car, when changing from day to night the headlights come on, visit old friends!
- One of our OT's favourite Apps!
- Turn iPad into a virtual play mat
- Requires using a 3 finger grasp to hold the car
- Using controlled hand wrist and finger movements, drive the car along a designated path
- Pressure needs to be modulated for car to work effectively
Pirate Scribbeard’s Treasure
$2.99
iPad

• Verbal instructions on what to draw
• Use a stylus or your finger(s) to complete the drawings
• Have your drawings come to life with entertaining verbal descriptors and comments
• Engaging, motivating and entertaining
• Reinforce use of a pencil/pen by drawing with a stylus on the iPad
• Highly engaging

Q&A

For more information:
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TO REGISTER for other webinars:
http://assist-tech.ednet.ns.ca/Assistive_Technology_Centre/AT_Training_Opportunities.html