No More Crayons!
Multi Sensory Strategies for Reluctant Writers

By Shirley Sutton OT Reg. (Ont.)

Love of Literacy Workshop
April 13 2013
Learning Objectives

– Why we need strategies for reluctant artists, writers and children with special needs
– Prerequisite skills to assess
– 7 senses and how to use them
– What to look for?
– Multi sensory interventions for all students
– Recent Research- “best practice” for writing
– Where to learn more
Reasons Behind Reluctant Writers

• No match between strengths and interests
• Not motivated, ‘cause I don't get it!'
• Not sensory skill friendly e.g. I can’t tolerate the feel of the paper on my skin
• Executive Function issues i.e. perfectionists see the mismatch between the visual image and their motor output = frustration builds!!
Printing Impacts Literacy

- Struggling printers have difficulty achieving in ALL academic areas.
- If children can’t remember how to make their letters and numbers, or who have poor letter recognition, causes delays in spelling, math, sentence composition.
- 20% of primary children have at least a two year delay in printing skills.
- Why? Teachers and parents spend less time teaching printing, and use inconsistent instruction and evaluation methods, often with the unfounded belief that technology will replace the need to print!
- As printing and keyboarding are both visual motor skills, a child who can’t print may have trouble keyboarding.
- Struggling printers receive lower grades, are shunned by peers, and exhibit lower self esteem.
- Source – www.zonein.ca
Detective Work

• Is it Developmental coordination disorder (DCD)
  – Can be a global issue or more specifically show up in fine motor difficulties with dressing, fasteners, cutting and printing (Medical diagnosis)

• Specific learning disability
  – Dysgraphia – psychologist diagnosis
  – Can be great at art work but has significant difficulty with spelling, printing, typing
  – Other dx such as ADHD, ASD ....
What to Look for?

• Medical or developmental differences
• Sensory motor skills including 7 senses
  – Gross and fine motor skills
  – Eye hand preference
  – Posture and seating
  – Tool use
  – Interests and motivation
7 Senses +?

- Touching
- Moving (Vestibular and proprioception)
- Seeing
- Listening
- Smelling
- Tasting
- Internal senses e.g. hungry, full bladder, heart rate etc
Eye-hand coordination
Ocular motor control
Postural adjustments
Auditory/language skills
Visual spatial perception
Attention
Coordination
Fine motor/gross motor skills
Self regulation

SENSES: Touch/Vestibular/ Proprioception/ Vision/ Hearing/Smell/ Taste

Motor planning
Reflex maturation
Screening
Postural security
Occupational Therapists ...

• Sensory and motor foundation skills
• Self regulation skills
• Look at skill breakdown/ task analysis
• P.s. We work in many settings including family health teams, hospitals, treatment centres, preschools, schools and private practices
Where is the Child on the Path?

• Early emergent
• Later emergent
• Transitional
• Beginning Conventional
• Later Conventional
• See *Teaching Literacy*...
Make Early Writing Fun

• Throw away the crayons if they are a problem
• Worksheets and workbooks are not the answer!
• What works for students with special needs?
  – Play based interventions
  – Choices and novelty
  – Teach to strengths and interests (special interest area)
  – Teach Letter Formation (start with circles going counter clockwise)
Multi-sensory Strategies

- Tactile
- Visual
- Kinesthetic
- Taste & Smell
- Auditory

- Feel it: soap it, sand it, bump it, mix it
- Light it up
- Smell it, eat it
- Wash it, jump on it
- Shake it, deal it, win it, spin it
- Sing it, sound it out
Enhance Tactile component

• Classic sandpaper letters, numbers, build a letter, Wikki Stix, HWT wood pieces
• Messy is often motivating! Tactile and messy play
• Look for alternatives to written demands- e.g. 3-D letter beading and stamping (also improves in-hand manipulation)
Kinesthesia/ Proprioception

- Unconscious awareness of where our body and limbs are in space, and how much force we are using with our muscles
- May look like the child needs bouncing, pushing, pulling, throwing,
- Leans on other people, furniture, objects, even in familiar situations
- May push too hard and break crayons, or grasp too weak
- Can look clumsy, poor coordination
- May use their eyes to guide all writing so it's very slow and tiring
Body Awareness Tips ‘n Tricks

• Body Breaks
• Obstacle courses with Checklists
• Resistance Work (clay play, magnets)
• Involve the whole arms (upright surfaces)
Ears - SING for Tripod Grasp!

1,2,3 Song *(to the tune of Zoom, Zoom, Zoom)*

1, 2, 3, these fingers work for me
These fingers do their best
While 4 & 5 take a rest
1, 2, 3, these fingers work for me.

1, 2, 3, these fingers work for me
These fingers make a beak
While 4 & 5 have a sleep
1, 2, 3, these fingers work for me.

*Created by Sue Wahl OT Waterloo*
Smell and Taste Tips

• Mr Sketch
• Guess the smell and tick it off

• Tic tac toe with straws
• Allow candy or gum for focus issues
Essential Fine Motor Hand Skills

- Finger Strengthening,
- Finger To Thumb Opposition,
- Forearm Strengthening,
- Lateral Pinch,
- Power Grasp,
- Thumb Strengthening
- Wrist Extension
Foundations for Successful Printing

• Research says early exposure to writing as important as exposure to books
• Are language skills an issue? (see a Speech language pathologist)
• Have child dictate a story, versus having them write it
• Working memory?
Spatial Challenges

1. Consistent hand preference and awareness of right left “directionality”
2. Letter Size consistency
3. Spacing between words
4. Location of letters, relative to the baseline
5. General organization of print on the page
Right Left “Directionality”

- Consistent hand preference is often linked to inability to cross midline of the body
- For example when drawing diagonal lines, midline bump
- Tips – eye checkup first
Midline Crossing Games

- Brain gym
- Cross crawl
- Xbox- fitness- “boxing”
- Lazy 8
- Work Desk Mix-Up – move things around
- Opposite hand game- try eating with your non-preferred hand
Hand Clapping Games

• New research found a clear link between hand-clapping and neurological development that aids cognitive thinking, writing and literacy
• Developmentally interest fades usually after age 7

http://www.israel21c.org/201008108010/social-action/applause-for-clapping-your-hands
Lazy 8 for Midline Crossing

- Train track or race car track
- Chalk it, paint it, doodle on iPad
- Later add lc alphabet
OT Top Motor Skills Tips

• Find a motivator so they will practice daily!!!
• Water play?
• New tools? Tiny stacking pencils, smelly markers, rub off crayons
• Snack time – use “Magic Bracelet” and tongs
• $$ coins in a piggy bank
• Constructive destruction - shaving cream. “rewarding resistance” tear apart model magic play do etc.
CD Case – Dry Erase
Triangle, Egg or Ball Shape Writing Tools

• Good early writing tool, promotes wrist extension when used on chalkboard, “opens” web space
• Break chalk ~ 2 “ long or less to ensure child doesn’t use “power grasp”
• Later can lengthen for tripod grasp carryover
Magic Bracelet

- Provides practice in the ‘alligator” tripod grasp, which requires separation of the 2 sides of hand
- How? Bead is held under 4th & 5TH fingers while playing a game, eating a treat etc.
- If child gets tired and reverts back to 4 or 5 finger grasp, relax, then try bracelet again
- Try for 10 turns at once, repeat throughout day and watch how pencil grasp improves!
Efficient Grips

TRIPOD
the most efficient

Quadrupod
not as mobile
but acceptable

Adapted Tripod
good for low tone, not 1st choice

INEFFICIENT GRIPS

thumb wrap
transpalmar

thumb tuck

interdigit brace

supinate

index grip
Pencil Grasp Research

Schneck, & Henderson (1990) found close to 50% of three year olds have *ability* to hold a small crayon correctly

—Demo (visual/tactile kinesthetic cues)

• Weiraub (1999) used small crayons, with 4-5 yr olds, small crayon technique had significant influence on formation of a tripod (mature) grasp

• Most OT research promotes teaching correct grip

• *Source - [www.hwtears.com](http://www.hwtears.com)*
Pre Writing Ideas

- Model simple drawing – see demo
- Paint with water (use Q-tips, easel painting)
- Finger painting – bath tub fun!
- Coloring – make tactile boundaries
- Games with easy strokes- x & 0 , dot –dot
- Drawing shapes-

- To make n new motor plan, practice 5 reps
Visual Kinesthetic Approach

• Early printing is highly visually guided
• To become fluent writers, need to build motor memory via kinesthetic system
• How? Consistent letter formations
• e.g. consistent program such as *Handwriting Without Tears, Wahl & Sutton* (start the letters at the top, make O with counter clockwise movement C
• Use consistent language cues (self talk)
Multi Sensory Means...

• Move the arm, speak the sound or say the name at the same time!!!
• Formation ---tracing, make them on the windows, dry erase boards, rugs, paint brush with water mats, on their backs, eyes open/closed
• Names with Blended sounds e.g.,. Shanti  teach Sh “2 letters together make 1 sound”
• Thanks to E3 Simcoe County Early Literacy
• http://www1.e3.ca/sites/default/files/1%20Kitchen%20Table_Bathroom.pdf
New Tactile Fun

- Snow
- Moon dough
- Moon sand
- Discovery Bags
- Wikki Stix/Bendables
- Giant pipe cleaners
- Plastic Canvas
- Pretzels
- Felt & Fabric
- Small sponge for pinch on tablet
Principles of Readiness to Print

• Systems intact? vision, hearing, language, attention, memory, motor
• Screened by GP/ Early Intervention/ SLP/OT/PT/Spec Ed
• Motivation?
• INTERACTION: joint attention, engagement, turn taking & imitation, sensory factors
• Motor planning – child links several action sequences (often goes with expressive language)
Principles of Print Awareness

• Know spatial directions on own body
• Spatial terms: sizes, front/back of book
• Reading begins top/bottom, left /right
• FM - turn pages of book correctly
• “Writes” by scribbling
• Shape, colour and letter matching
Pre Print Progressions
Copy versus Trace

• Pre print – see [www.HWT](http://www.HWT) "Tracks"
  – try iPad – doodle games, can draw with fingers so no tool required

Dot to Dot Tracing – lots great free worksheets
Learning to Print Numbers - Number Raps

• start with 0, 6, 8, 9
  0  “Around we go”
• 6  Down and around a monkey’s tail I see.
• That’s the way to make a six, as crazy as can be.
• Make a circle - do not wait. Make another - that’s an 8!
• (or) make an “S” do not wait, make another - that’s an eight!
• A loop and a line make nine!
Magnetic Touch Math
Songs for letter size and position relative to the baseline

• Singing abs song while making your body
• “tall” like t arms up
• “small”, ½ space letters e arms on hips
• “diver” j g y p q e arms to ground
Learning to Print Your Name!

• Motivating!!
• Start with Simple Matching
• See non- print games (demo)
• See Visual Strategies
Name Song

• *Tune- BINGO*

I know a boy/girl at ___ ___school (who’s 4 years old) and ______is her name – oh

N a t h a n  *repeat x 3*

And Nathan was his name – oh!.
Independent Work Tasks

- Pinterest board
- Tasks Galore
- Shoebox tasks
- Toddler busy boxes
- Montessori tasks
While the child is printing the letter, please make sure he/she is making it the same way each time. Please follow the arrows that accompany the model.

Words to say when drawing this letter:

AVE’S
LOVES
ONUTS!
How to make a letter a:
1. make a clown nose
2. go up
3. back down

Draw your apple here

My [unt eats [ huge apple.

© 2003 Learn to Print and Draw: A Visual-Kinesthetic Program.
Sue Wahl & Shirley Sutton
Deciding to allow scribing or typing?

• When the academic demands are more important, consider allowing the child to dictate, otherwise the child may learn to think in short answers, to avoid printing!
• Poor printing then starts to affect academic outcomes
• Keyboarding is a crucial life skill
• Formal touch typing is best for Gr. 3 + up
• Printing on forms is a crucial life skill

source - L. Broun Spec.Ed.Consultant Peel Board
New Literacy- Keyboards
iPad Apps for Fine Motor Practice

• Midline crossing...what
• Injini
• Dexteria
• Bugs and Buttons
• Finger Fun HD (not tried)
iPad apps for Reading

**Read2Go** application, just like the Bookshare computer site, highlights and reads books to the user.
- The good thing about this app is the highlighting of the words as they are read aloud
- proven to help children with reading disabilities learn to read as they follow along,

iPad apps for Early Printing

• OT favorites are:
  • Letter School
  • I Write Words
  • Handwriting without Tears
From the iPad to the Real World


- Feed the animals
- First Words – early spelling and letter name
New Research on Pencil Grasp

• Study of pencil grasp patterns in grade 4 children interventions for handwriting difficulties should focus more on speed and letter formation than on grasp patterns.

Printing Research

• Research shows students in Gr. 2-6 spend 31-60% time on fine motor tasks, 85% of these are paper & pencil tasks
• Breakdown can occur in
  – Motor skill for pencil grasp & accuracy
  – Motor planning & sequencing
  – Visual perception, spatial
  – Language & memory load
Take Home Messages

• Printing takes practice!!
• Think creatively and multi sensory
• Hand clapping and rhythm games help!
Dollar Store “Therapy”

- spray bottles and squirt toys
- tongs & clothes peg games
- squeeze toys
- spinning tops
- wind up toys
- rolling pin
- hammers
- playing cards- dealing, counting, matching and sorting
- pennies in a piggy bank
- puzzles, blocks
- dice
Learn more?

• www.wikkopedia – articles on everything! Including: SI, Autism, brain function

• Future workshops:
  – Contact me at shirley.sutton@sympatico.ca
  – Follow me on Pinterest
  – check my website
  – www.ot-shirleysutton.com

2013 Shirley Sutton
More Dollar Store Shopping

• beading (start with a chopstick, straw or gimp if string is too difficult)
• open and close type pill containers are great for sequencing
• bingo daubers, finger paints, mini paint rollers, chalkboard with fat chalk
• poker chips into a pool noodle
• playdo, silly putty, shaving cream
• pool noodles & clipboard for slantboard
• Chopsticks for tongs (see demo)
• craft foam cut outs
• craft sticks, pom poms
Relevant Websites

• All Kinds of Minds – Mel Levine
• Learning Disabilities Association
• Do 2 learn – free paper to print
• Tasks Galore
• Handwriting Without Tears
• AOTA, CAOT
• www.Pinterest.shirlot
• Youtube [http://www1.e3.ca/?q=node/197](http://www1.e3.ca/?q=node/197)
• BRAIN GYM LAZY 8s ALPHABET 8s
T.E.A.M.

• Together
• Everyone
• Achieves
• More

Asperger Syndrome and Young Children  T.Bolick 2004