



Teaching shape cutting to a child with autism

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Introduction

Four Points is a government accredited, family-funded, private agency that services children with autism spectrum disorders. Four Points uses Intensive Behavioural Intervention (IBI) to encourage positive responses and teach individuals with developmental delays. The goal of Four Points is to integrate the four essential pieces of life's puzzle to create a positive picture. This involves building programs that combine focus on the individual, the home, the school and the community.

Programs at Four Points target the following areas:

- Cognitive skills
- Behaviour/Regulation skills
- Communication skills
- Speech and Language development
- Augmentative Communication
- Play and Social skills
- Motor skills
- Self-Help skills

Objective

To encourage and develop fine motor skills and ability to cut paper into shapes, using scissors.

Rationale

Developmental studies indicate that children aged 4 and up have the necessary pre-requisite skills to cut along lines when given scissors. By age 4, fine motor skills have developed in a way that allows children to manipulate scissors and move hands along paper to guide the line of the cut. Fine motor skills are typically impaired in children with autism.

Cutting skills are a major focus of kindergarten programs in Ontario, with plans for integration into a school setting, this skill would be valuable for Thomas to have.

Participant and Setting

Thomas is 4 years and 4 months old with a diagnosis of autism. He has been attending IBI therapy three times a week for the past two years. Thomas is verbal and very active. He has very selective eating habits and difficulty swallowing food. Thomas' ABLLS assessments indicate he exhibits a large range of skills. Programs in Thomas' therapy sessions include asking questions using "what" and "where", identifying objects based on adjectives and completing mazes. Thomas' fine motor skills and hand dominance will allow him to manipulate scissors as needed to complete this program.

Cuts out shapes will be taught in the IBI session as well as at home and school, at a desk with a variety of mediators.

Procedure

Steps:

Provide Thomas with a paper with various lines across it and scissors, beginning with criteria 1.

Provide instruction (verbal Sd "cut it") and give physical prompts as needed

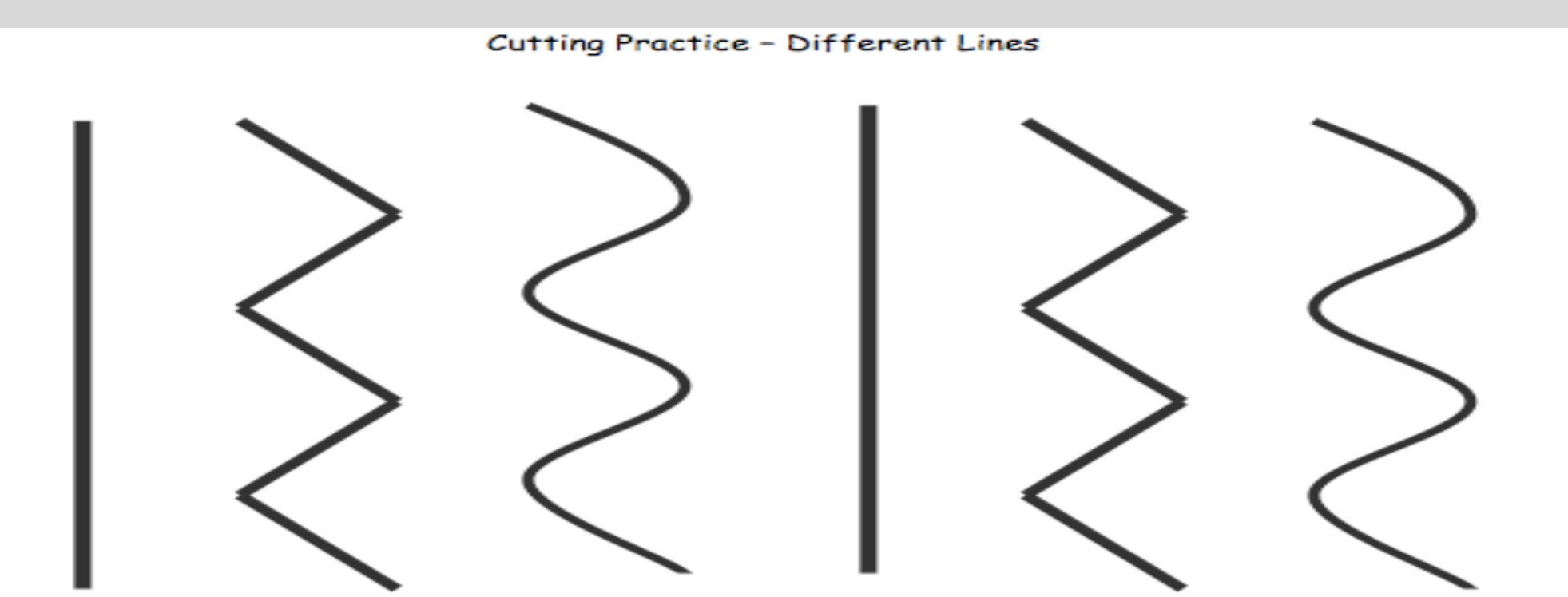
Transfer trial – 2 second delay at no or lesser prompt level

Ex. I: give a paper and scissors "Cut the paper"
-Give 0 second delay hand over hand prompt

L: Thomas cuts due to prompt

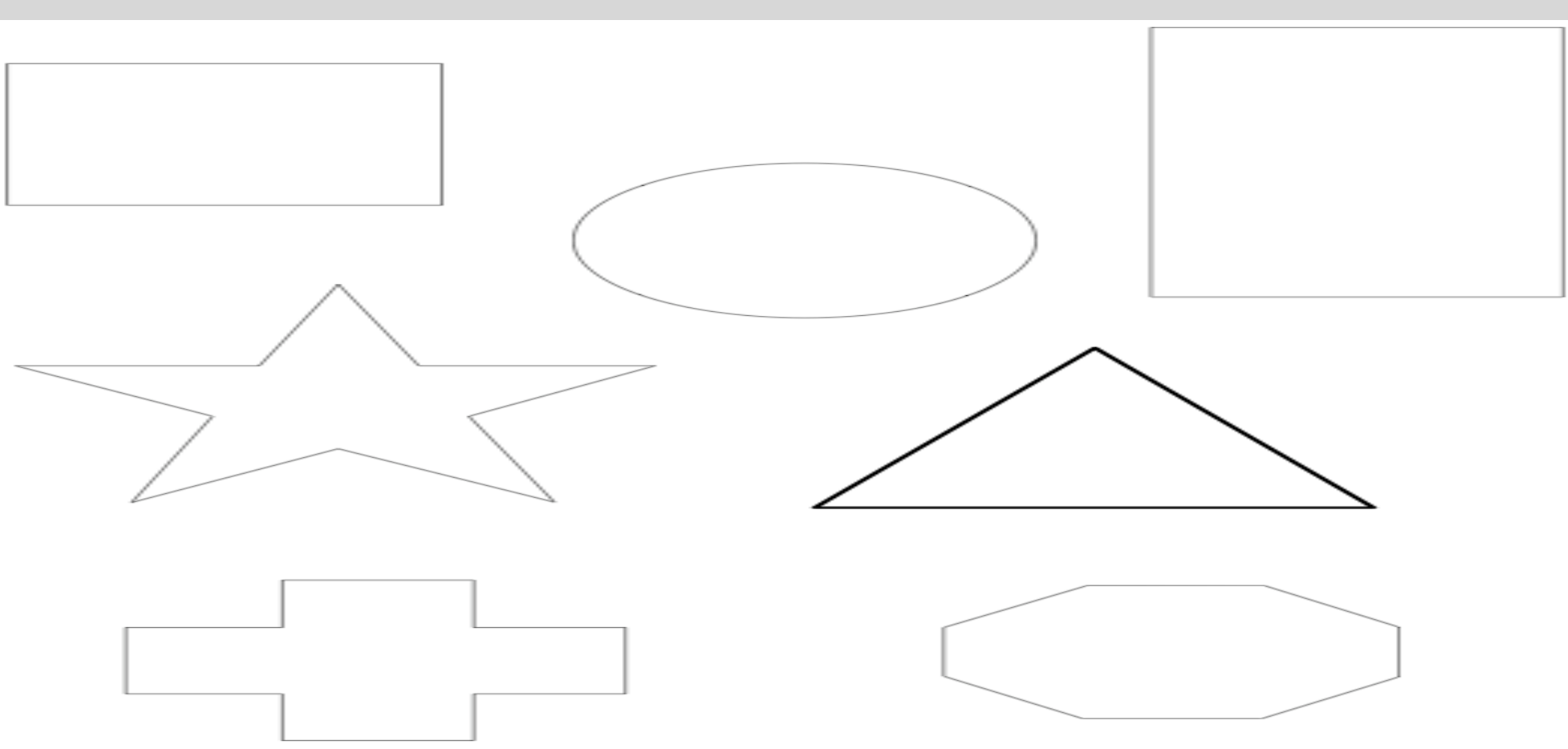
I: "Cut"

L: Thomas cuts with minimal or no prompts



Task Analysis:

- Cuts on a straight line across paper
- Cuts on a curved line across paper
- Cuts on a zig zag line across paper
- Cuts out circles
- Cuts out squares, rectangles, and triangles
- Cuts out various novel shapes



Prompt hierarchy:

For each stimuli indicated, do the following:

- Full physical prompt (hand-over-hand by standing behind Thomas)
- Partial physical prompt (direct Thomas' hand to hold scissors correctly and start cut)
- No prompt

Error Correction Procedure:

A	B	C
Instruction given "Cut"	Child does not respond, or attempts to make incorrect response	Repeat instruction and use increased level of prompt
A	B	C
Instruction given with an increased level of prompt	Child makes correct response	Praise. No tangible/token is given. Move on to next trial

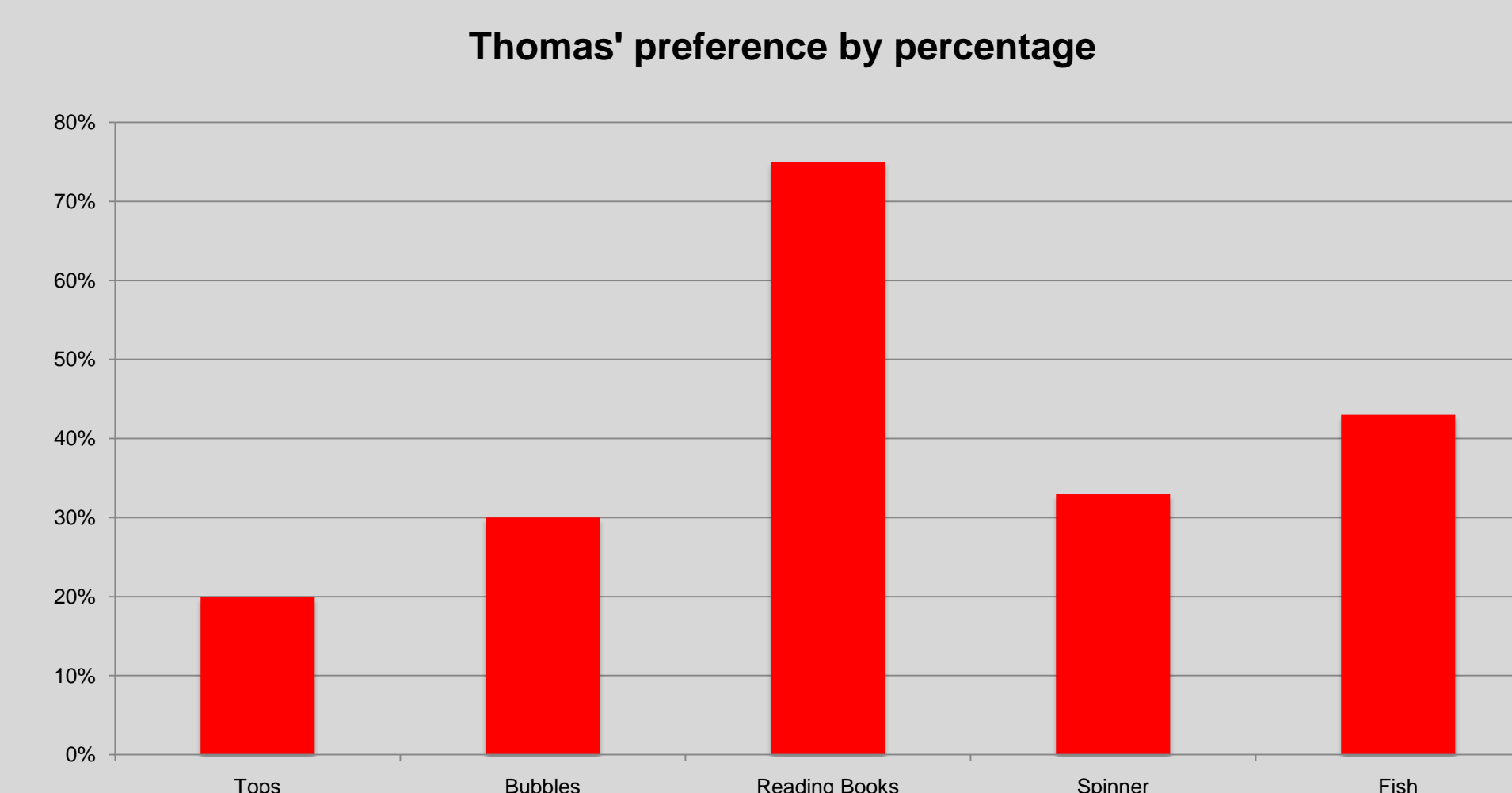
Data Collection

Probe data is collected based on if Thomas is able to complete the skill. Three consecutive successful probes will demonstrate mastery. Data will be collected following every trial by the mediator.

Primary therapist will graph cumulative number of shapes and lines cut acquired weekly.

IOR will be collected on 25% of trials, by having another therapist observe from within the room.

Results



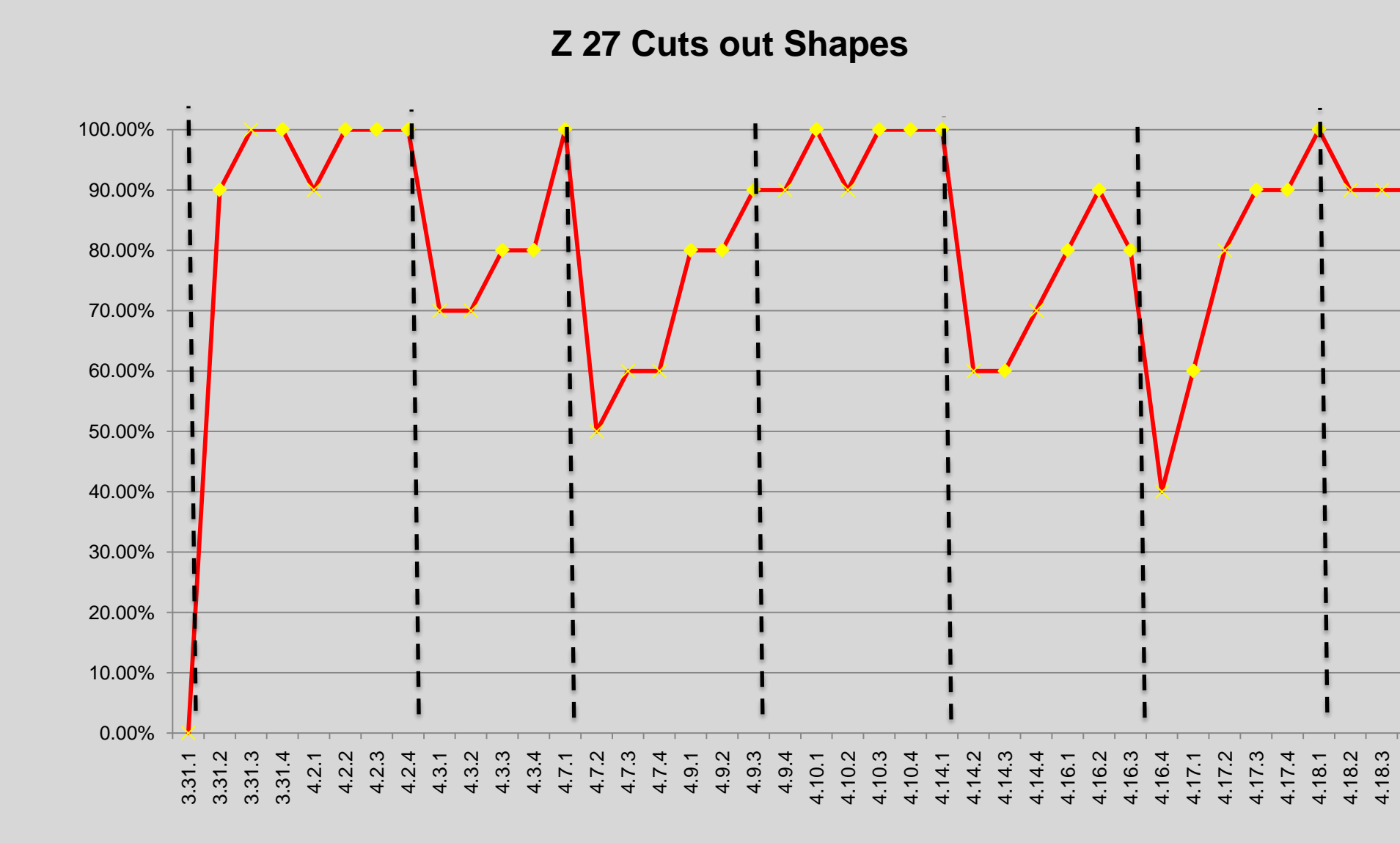
As Thomas did not have a recent reinforcer profile, a multiple stimulus without replacement preference assessment was performed

Observation and baseline assessment of Thomas' ability to perform ABLLS Z 27 (cuts out shapes) shows that he is unable to complete the program. Pretesting indicated that the child could complete snipping on paper, but was unable to complete cutting a line across a page.

Teaching began with Step 1 - Cutting on a straight line and followed prompt hierarchy until mastery criteria was met for each step of the task analysis. Teaching will continue until Thomas is capable of cutting various novel shapes with no prompt.

Program mastery criteria:

100 % correct across 3 consecutive probes and 2 instructors.
Number of trials per data set: 10



Generalization/Maintenance

Thomas will be cutting at home, school and in the centre, which will help to train for generalization during programming.

Once mastered cutting out novel shapes will be checked for maintenance after 1 week, 3 weeks and 2 months.

At this point, cutting out shapes will move into high probability and will be checked on a regular basis during programming and evaluated at school.

Discussion

A concern with regards to teaching this skill is the comparable skills of typically developing children. Based on Assessment of ten children without developmental disorders (including autism) shape cutting is an appropriate goal for boys in this range

Prior to implementing Cutting programs, fine motor skills need to be assessed to ensure adequate paper gripping skills. Therapists need to be aware of Thomas' motivation for cutting, if he does not enjoy it or it becomes too difficult, the task may become aversive and this must be avoided.

References

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