

JENNIE Bjorem MA CCC-SLP

54

DISCLOSURES

- **Financial Disclosure:** Jennie is the owner of Bjorem Speech Publications and receives pay from sales from her products on her website, TPT and Boom Learning. Jennie is the owner of Children's Therapy Services and case studies were conducted at her place of business.
- TAASLP provided my fee for this presentation.

55

LEARNING OBJECTIVES

- Identify how to choose functional targets to support a motor planning approach for CAS.
- Conduct cueing strategies to support a motor planning approach.
- Explain how ways to focus on movement rather than sounds for CAS therapy.

56

MoToR PlAnNING APPROACH For aPraxia

57

NDP3

NuFField dYsPraxia Program

NDP3 is a therapy approach used to treat severe speech sound disorders, including CAS. It is used primarily for children ages 3-7, but can be adapted to younger or older children. NDP3 is based on a motor learning approach that builds skills from single speech sounds to connected speech. It can be described as a “bottom up” approach, in that the aim is to “build” accurate speech from core units of single speech sounds (phonemes) and simple syllables.

58

ReST

RaPid SYllable TraNsITION Training

ReST is an evidence-based treatment developed to treat childhood apraxia of speech or ataxic dysarthria in children ages 4-12. ReST uses nonsense words that sound like real words but do not have meaning. Taking the meaning out allows the child to concentrate on accurate movements, stress, and prosody. Treatment sessions follow a consistent structure of training and practice.

<https://rest.sydney.edu.au>

59

SIMULTANEOUS PRODUCTION

SaY iT ToGeTher

- Provides the most support with auditory and visual attention
- Slowed rate, elongating vowels
- Move toward normal rate, correct movement gestures and no groping
- Vary prosody
- Slowly fade volume to a simultaneous mime only
- When accuracy is achieved move to Direct Imitation

62

DIRECT IMITATION

Model..IMITaTe

- Therapist provides an auditory model of target, while child watches
- Child repeats target
- If support is needed the therapist can go back to simultaneous production
- OR mouth the movement gesture as child repeats
- Fade miming, vary prosody
- Add or Fade cues as needed for success

64

DELAYED IMITATION

Model..Wait..IMITate

- When the child is producing the utterance in direct imitation, with normal rate, accurate movement gestures, and is able to vary prosody...
- Clinician adds a 1-2 second delay before child imitates
- Miming the movement gesture as child repeats can be very helpful at this point.
- If more support is needed the therapist can go back to direct imitation.
- Fade miming, vary prosody

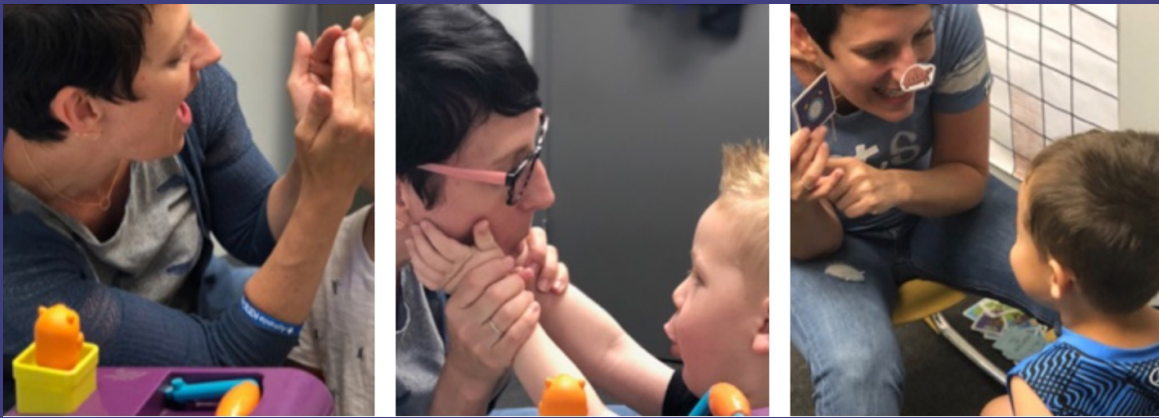
65

Children must be able to watch your mouth for DTTC to be successful.

- Eyes on me
- Side by Side
- Recording practice
- LOTS of cueing



66




WATCH ME TRICKS

67

Taking
DATA

For DYNAmic TEMPoral
& TacTilE cueing

68

|  8-POINT SCALE SCORING RUBRIC | | | | | | | |
|--|---|--|--|--|---|---|---|
| Unable to produce target word. | Able to produce in simultaneous production, vary prosody and appropriate transitions. | Able to produce target correctly in direct imitation with multi-sensory cueing | Able to produce the target in direct imitation without cueing, correct stress and prosody. | Able to produce the target in delayed imitation with multi-sensory cueing. | Able to produce the target in delayed imitation without cueing, correct stress and prosody. | Able to produce the target spontaneously with multi-sensory cueing. | Able to correctly produce target spontaneously. |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Unable to produce target word. | Able to produce in simultaneous production, vary prosody and appropriate transitions. | Able to produce target correctly in direct imitation with multi-sensory cueing | Able to produce the target in direct imitation without cueing, correct stress and prosody. | Able to produce the target in delayed imitation with multi-sensory cueing. | Able to produce the target in delayed imitation without cueing, correct stress and prosody. | Able to produce the target spontaneously with multi-sensory cueing. | Able to correctly produce target spontaneously. |

Rubric based on DTTC Hierarchy and created by Bjorem Speech Publications

Bjorem Speech Publications, LLC.
www.bjoremspeech.com

69

HOW & HOW OFTEN

Should I Take data?

- Take data once a month ... WHY? Because it is a waste of time!
- Take data the same way every time – e.g., beginning of session on 1st production
- Use a rubric... too much is going on in apraxia therapy to break down prosody, vowels, segmenting etc.

70

uNderSTaNdIng **PML** PrINciPles OF MoTOr leaRNIg

Principles of Motor Learning, Mass et al (2008)

71

PRE-PRACTICE

- Attention to Task
- Motivation
- Understanding the task
- Understanding what is expected
- Understanding “correct response”
- Stimulability for desired response – target selection

72

STRUCTURE OF PRACTICE

Mass Practice-

Working on a target with little or not time in between

Blocked Practice-

Work on the same targets in the same order

*small amount of targets
allows for more mass practice
– motor performance

Distributed Practice-

Distributing the target practice over time

Random Practice-

Randomizing practice - no predictable order

*facilitates motor learning –
generalization of non-practiced words

73

Types of FEEDBACK

■ ■ ■

Knowledge of Performance

(KP)- specific feedback – you bit your lip, I heard the /f/

Knowledge of Results (KR)-

Giving feedback whether a target is correct or not...
yes/no

74

FREQUENCY OF FEEDBACK

...

- Immediate Feedback –**
facilitates motor performance – how they are doing
- Delayed or Less Frequent with improved accuracy-**
Promotes motor learning and generalization to untrained probes

Strand, E., PRACTICE, PRODUCTION FREQUENCY, AND REPETITION, www.apraxiakids.org

75

PRACTICE

High repetitions, correct Productions

77



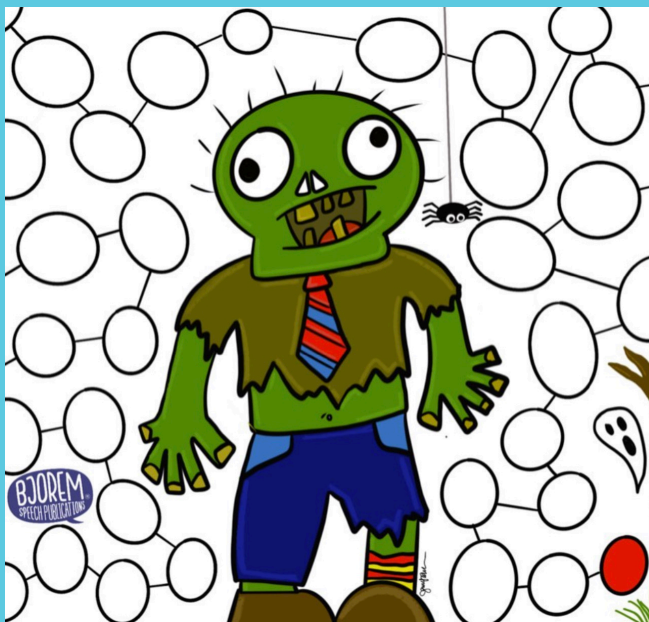
Targets that received treatment in the high frequency or more practice trials were more "stable and accurate from session to session" compared to speech targets with moderate trials.

(Edeal & Gildersleeve-Neumann, (2011).

- High trials
- Frequent therapy sessions
- Shorter intervals

Source: Edeal, DM and Gildersleeve-Neumann, CE. The Importance of Production Frequency in Speech Therapy for Childhood Apraxia of Speech. American Journal of Speech-Language Pathology. May 2011, Vol. 20, 95 – 110.

78



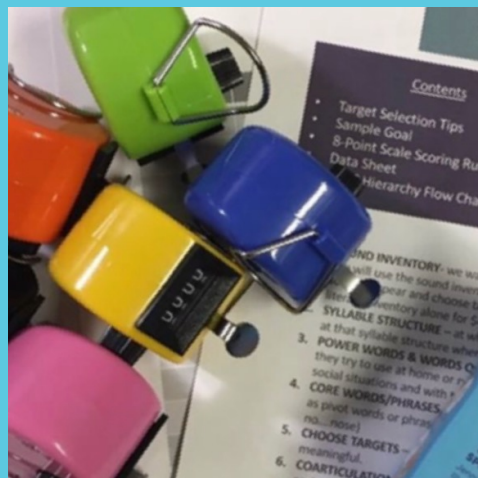
HOW?

- Set expectations early
- Tell the child what you are going to do
- Focus on one target
- SHOW the child how many
- PRE-PRACTICE
- This skill takes time!!!

79

REPETITIONS

- Use a clicker
- Game pieces
- 5 finger count
- Stickers
- Dot markers
- Miniatures
- Abacus
- Txttools app
- Tallies
- Trial Sheets
- Beads
- Pop-its
- Legos
- Pom-poms
- Magnets
- Money



80

CUES
IN MOTOr PLANNING
TherAPY

83



CUEING

Tactile- touch, tapping

Visual- miming, simultaneous production, video, mirror, pictures, placement

Auditory- verbal models, reducing rate or drawing out sounds

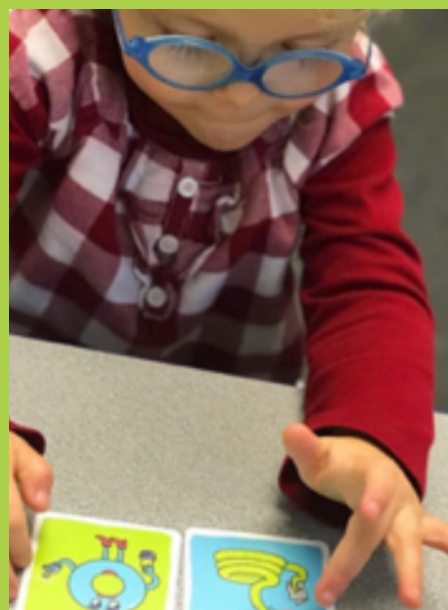
Metacognitive- signs, blocks, metaphors (picture sound cues), placement

Symbols and Meaning are linked in the brain whether they are words, gestures, images, or sounds. (Xu et al., 2009)

84

ALLLLL THE CUES!

- The GOAL is to make the child successful and get the production correct every time.
- Our job is ALLLL THE CUES to help support each production.
- As the child becomes more accurate in the motor performance, we can fade cueing and change feedback and practice facilitate motor learning!



85