UNC CHARLOTTE

ROBERT PENNINGTON PHD BCBA-D

WRITE ON! TEACHING WRITTEN EXPRESSION TO STUDENTS WITH ASD/ INTELLECTUAL DISABILITY

THE WRITTEN WORD MATTERS

- In demonstrating competence
  - In school
  - In employment
- In increasing one's own competence

THE WRITTEN WORD MATTERS

- In telling one's story
- In social interaction

Fri, Jul 20, 11:41 AM

Hope you're having fun

We are. Wish you were here!

Well you deserve it. Be safe and eat lots of carbs
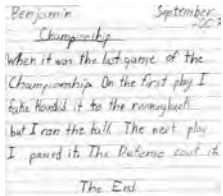
Tuesday 1:47 PM

IF WRITING IS SO IMPORTANT?

▸ Why do we teach it like this?
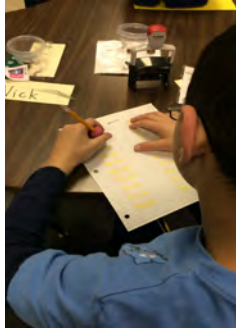
WRITING IS HARD

▸ It requires a complex amalgam of skills and knowledge that must be executed simultaneously.

OUR LEARNERS ARE COMPLEX

▸ Language Development

▸ Motor Skills

▸ Reading Skills

▸ Social Skills

▸ Experience and Opportunities to Write

WRITING IS SHAPED

▸ Much like vocal language, written expression is gradually shaped by its environment

▸ But unfortunately, many children with disabilities may not have conventional responses that are recognized or shaped

Snapshots

"It's good, Timmy, but it's not refrigerator good."

AND EDUCATIONAL ENVIRONMENTS ARE COMPLEX

▸ Teacher knowledge

▸ Teaching procedures

▸ Emphasis on writing

▸ Opportunities to write

▸ Motivation

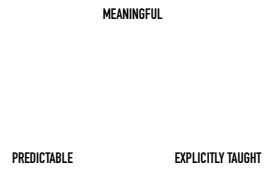POOR ACHIEVEMENT IN WRITING

COMPLEXITY OF WRITING

TEACHING

STUDENT DIFFERENCES

ONLY 27 % OF STUDENTS PERFORM AT PROFICIENT LEVELS

80% AT BASIC LEVEL

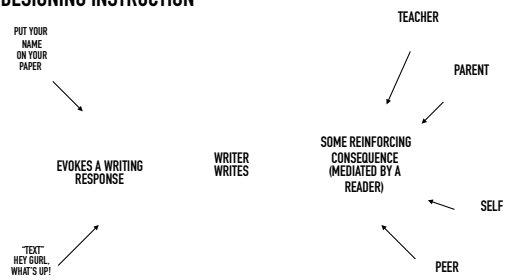## SHAKE UP THE WAY WE THINK ABOUT TEACHING WRITING

▸ Instead of an early focus on syntax, we focus on the interactions between a writer and the reader (that reinforces writing behavior)

THREE BIG IDEAS

MEANINGFUL

PREDICTABLE   EXPLICITLY TAUGHT

DESIGNING INSTRUCTION

PUT YOUR NAME ON YOUR PAPER

TEACHER

PARENT

EVOKES A WRITING RESPONSE

WRITER WRITES

SOME REINFORCING CONSEQUENCE (MEDIATED BY A READER)

SELF

"TEXT" HEY GURL, WHAT'S UP!

PEER

LOGICAL PATH

REQUESTS LABELING CONVERSATION

WRITING FOR ACCESS WRITING ABOUT THINGS YOU SEE WRITING ABOUT THINGS YOU KNOW

MAYBE EARLY ON

▸ We teach students to exchange words for specified reinforcers

  ▸ Signing in and out of activities

  ▸ Writing messages to their peers

  ▸ Playing waiter

  ▸ Googling

TEACHING STRATEGY 1

▸ Present reinforcing stimulus

▸ Immediately present model (if student can copy) or use of other prompting procedure if not

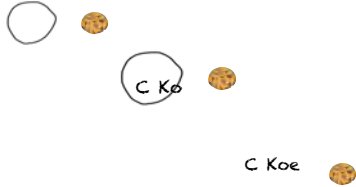▸ Read the work and immediately present reinforcers

▸ Fade prompts

COOKIE Cookie

TEACHING STRATEGY 2

▸ Shaping- the reinforcement of successive approximations to a terminal goalesent reinforcing stimulus

▸ Present reinforcing stimulus and a gentle prompt to write

C Ko

C Koe

A FEW WORDS ABOUT "WORDS"

▸ Accepting Approximations until the reader/writer relationship is established

▸ Picture/Words

▸ Assistive technology

  ▸ Speech to text

  ▸ Word prediction

  ▸ Keyboards
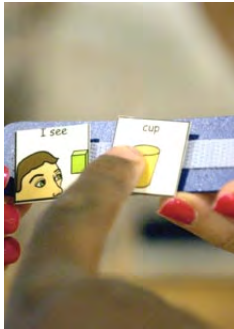
"COPYING TO TEXT"

▸ See-write relation

▸ It can be used as a prompt

▸ Typically developing children learn to copy environmental print
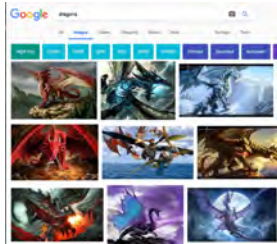
MAKE IT MEANINGFUL

DRAGONS

CARS

MONSTERS

ALIENS

SPACE SHIPS

STAR WARS

TEACHING SPELLING

SPELLING IS TOUGH

▸ Whereas reading requires decoding of visual stimuli, spelling requires encoding.

▸ Requires-Reading of the word, knowledge of phonics and structural analysis, visualizing the word, recalling word from memory, motor capabilities

▸ Spelling should be taught in concert with word analysis (Henderson, 1990)

SPELLING

▸ Most strategies capitalize on students' copying or matching skills

    ▸ Chaining

    ▸ Cover cover compare

    ▸ Delayed Matching

MEANINGFUL
PREDICTABLE
EXPLICIT

"CHAINING"

▸ Forward Chaining

    ▸ Purrazzella and Mechling (2013)

        ▸ Gradually increasing response requirement

        ▸ Time consuming

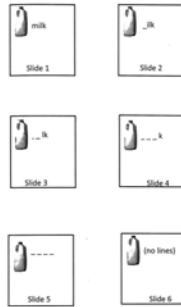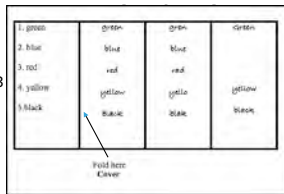   ▸ Might be best for teaching frequently used words (e.g., name)

milk — Slide 1; _lk — Slide 2; _ lk — Slide 3; - - - k — Slide 4; - - - - — Slide 5; (no lines) — Slide 6

Figure 4. Example of slide progression using the forward chaining procedure.

COPY–COVER–COMPARE

▸ Copy cover compare

    ▸ Present list of words

    ▸ Copy first word

    ▸ Fold column 1 over col. 2

    ▸ Write from memory in col. 3

    ▸ Check your answer and fix

## SOME STUDENTS MAY NOT ACQUIRE STRONG SPELLING SKILLS

TEACHING SENTENCE WRITING

THE SENTENCE

▸ Sentences are miniature compositions (Saddler, 2012)

▸ The serve to illuminate controlling variables for the emission of the sentence

  ▸ I saw a red bear?

  ▸ Can someone get me a gummy bear?

  ▸ There is a bear!

WRITING SENTENCES

- Know the rule that sentence names something or somebody and then tells more
- Can identify a sentence that follows the rule
- Completes a sentence about a picture
- Generates sentences that follow the rule
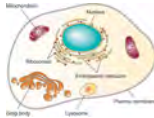- Combine simple sentences to create more complex sentences
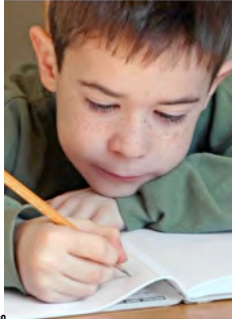
Kameenui & Simmons, 1990

A SENTENCE NAMES SOMEBODY OR SOMETHING AND TELLS MORE ABOUT THE PERSON OR THING

Kameenui & Simmons, 1990

SENTENCE WRITING SCOPE AND SEQUENCE

- *Selecting sentences that name somebody or something and tell more about the person or thing depicted in the picture*

I SEE A DOG   I SEE A CELL   I SEE SEE SEE

SENTENCE WRITING SCOPE AND SEQUENCE

▸ *Completing sentences that name somebody or something and tell more about the person or thing depicted in the picture*

▸ The man _____

FLIPS   EATS   EATS

SENTENCE WRITING SCOPE AND SEQUENCE

▸ Generating sentences that tell the main thing that happened in a picture or series of pictures

I   A   SEE   COW

FROG   TRAIN   WHALE   THE

SENTENCE WRITING SCOPE AND SEQUENCE

▸ Generating sentences that name somebody or something and tell more about the person or thing

THE   IS   FROG   WET

WHITE   TRAIN   WHALE   GREEN

USING FRAMES AND SYSTEMATIC INSTRUCTION

▸ Pennington, R. C., Forman, L. H., & *Gurney, B. N. (*2018*). An evaluation of procedures for teaching students with moderate to severe disabilities to write sentences. *Remedial and Special Education, 39,* 27-38.

▸ Pennington, R. C., *Flick, A., & *Smith-Wehr, K. (*In Press, 2018*). The use of response prompting and frames for teaching sentence writing to students with moderate intellectual disability, *Focus on Autism and Other Developmental Disabilities.*

▸ Pennington, R. C., & *Rockhold, J. (2018). A brief report: An evaluation of an instructional package for teaching sentence writing to students with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 48,* 301-306.

GENERAL PROCEDURES

VISUAL STIMULUS + DIRECTIVE   MODEL PROMPT (VARIATIONS)   WRITING RESPONSE   IMMEDIATE CONSEQUENCES

PENNINGTON, FLICK, SMITH-WEHR (2018)

WRITE A SENTENCE ABOUT WHAT YOU WANT

WRITE A SENTENCE ABOUT WHAT YOU SEE

WRITE A SENTENCE ABOUT THE

I want a chip

r	candy	see	a
dog	want	chip	game
the	car	tree	fish

RESULTS
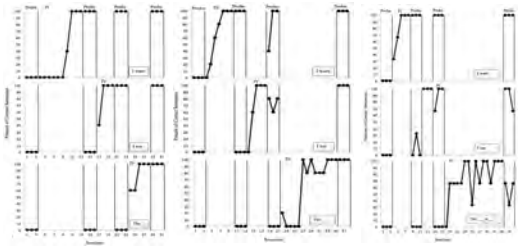
PENNINGTON, FLICK, SMITH-WEHR (IN PRESS, 2018)

- Participant 1
  - I want the chip, see fish, fish is hungry
- Participant 2
  - I want the tickle, penguin, The shark is blue
- Participant 3
  - I want the candy, I the shark, the shark black

PENNINGTON, FOREMAN, & GURNEY (2018)

- Intervention Sessions
  - Present the rule "A sentence names a character and tells more (Kameenui & Simmons, 1990"
  - Constant time Delay
    - 2 sessions of 0-s
    - 15 s delay trials

- Generalization probes in free writing journal activity

PENNINGTON, FOREMAN, & GURNEY (2018)

WRITE A
SENTENCE
TELLING ME WHAT
____ LOOKS LIKE

DTHE FISH IS ORANGE
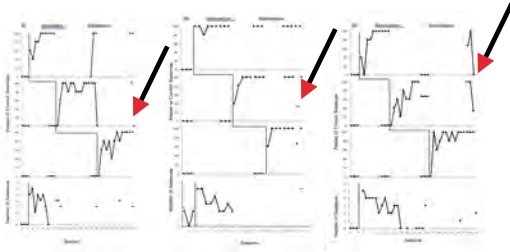
WRITE A
SENTENCE
TELLING ME WHAT
____ IS DOING

The fish is

WRITE A
SENTENCE
TELLING ME
HOW ____ FEELS

RESULTS

HOUSTON, WE HAVE A PROBLEM

▸ In stimulus control

  ▸ Write about what the animal

    ▸ Looks like

    ▸ Is doing   THE BUG
                        IS RED

    ▸ Feels

PENNINGTON & ROCKHOLD (2018)

▸ Basic instructional elements

VISUAL STIMULUS
PICTURED STIMULUS (ANIMAL)

+

VERBAL DIRECTION
WRITE A SENTENCE ABOUT THE PICTURE

Prompt
Picture card
The (s) (v)
The (s) (v) (o),
The (S) is (Adjective)

Two exemplars/per sim
Randomly presented

PROMPT FADING
CONSTANT TIME DELAY

PENNINGTON & ROCKHOLD (2018)

SLP

WRITE A SENTENCE ABOUT THE PICTURE

DTHE MONKEY EATS
I want a chip

I	candy	see	a
dog	want	chip	game
the	car	tree	fish

DTHE MONKEY EATS

RESULTS

NUMBER OF WORDS SPOKEN
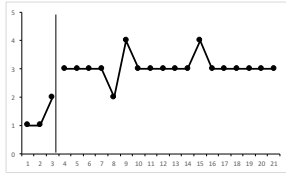
PENNINGTON & ROCKHOLD (2018)

- ▸ Participant 1- 1 sentence format
- ▸ Participant 2: 3 different sentence formats
- ▸ Participant 3: 2 different sentence formats
- ▸ Participant 4: 1 sentence format

- ▸ Presentation bias during prompting

STORY WRITING

A SERIES OF STORY WRITING STUDIES

▸ Pennington, Ault, & Schuster, & Sanders, 2011; Pennington, Collins, Stenhoff, Turner, & Gunselman, 2014; Pennington, Stenhoff, Gibson, & Ballou, 2012

▸ Used selection-based writing software and simultaneous prompting to teach students to write simple 3 to 4 sentence stories
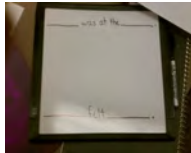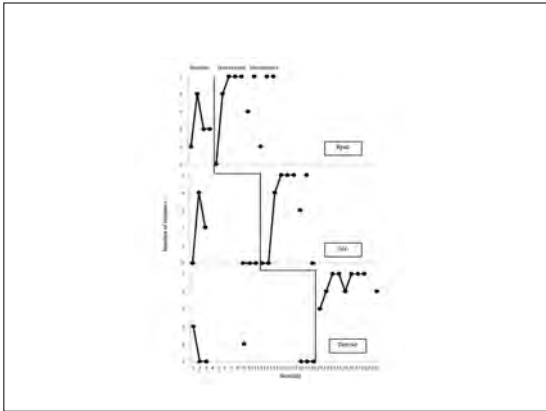
Sample template

Robot went to space.
Robot saw Yoda
Robot was happy

Spongebob went to school
Spongebob saw friends
Spongebob was happy

A SERIES OF STORY WRITING STUDIES

▸ Students wrote a combined 53 stories

▸ All students acquired story writing responses

▸ All students acquired new sight words

▸ All student increases from 0 to 5 story elements

▸ Students demonstrated 100% comprehension

▸ All students demonstrated some generalization across response topographies

---

UNPUBLISHED PLANNING STUDY

▸ Let's work on writing a story today.

  ▸ First, we need a character

    ▸ What do you want to write about?

  ▸ Now we need a locale,

  ▸ Now we need an action

    ▸ What did he do?

▸ Now, we need an emotion

  ▸ How did your character feel?

STORY WRITING STUDY

- ▸ Pennington & Koehler (2017)
  - ▸ Three middle schoolers with MSD
  - ▸ Focus on story grammar
    - ▸ Inclusion of Character, Settings, Event 1, Event 2, Character emotion

---

STORY WRITING STUDY

- ▸ Present a video
  - ▸ Pixar clips
- ▸ Introduce 5 story elements
- ▸ Complete template together

Once there was a _____ life
lived in the _____; One day
Then _____
_____ felt
The end.

STORY WRITING STUDY

- ▸ Present opportunity to write
- ▸ Self evaluation with graphing

How many parts did I use today?

Character + Setting + Event 1 + Event 2 + Emotion

OTHER NARRATIVES

PENNINGTON, MOHAMMAD, & MIMS (UNDER REVIEW)

▸ Choice of text

▸ Directive to read and write an opinion about what you read

▸ Constant time delay

  ▸ Controlling prompt (gesture to word)

  ▸ 2 days of 0s-delay trials

  ▸ 5 s-Constant delay trials

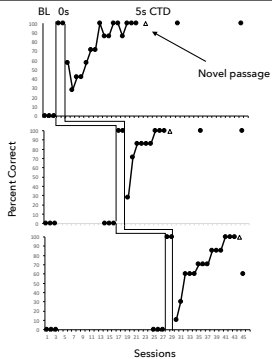▸ Predictable writing routines across varied stories (multiple exemplars)

DEPENDENT VARIABLES

▸ Percent of correct words correct

  ▸ Taught as a chained task

    ▸ I read about_____. I like/disliked the story.

I	+
Read	-
about	-
the	+
(noun)	-
I	+
dis/liked	-
the	+
story	-
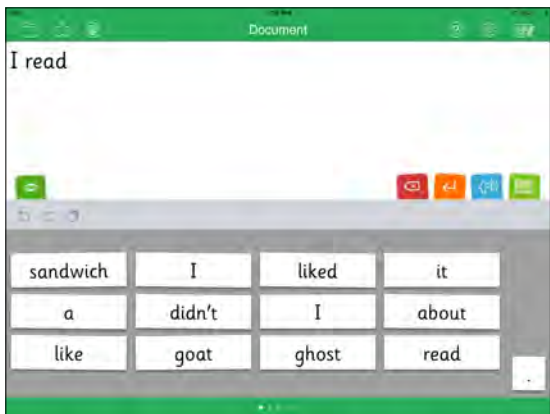
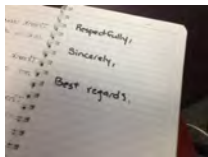## RESULTS

RESUME COVER LETTERS

▸ Pennington, Delano, & Scott (2014)

   ▸ 3 high school participants with ID

      ▸ Dependent variables

      ▸ # number of cover letter components

▸ Independent Variable

   ▸ Modeling

   ▸ Revision + Prompting

   ▸ Self graphing

RESUME COVER LETTERS

▸ Daily probes

   ▸ During instruction

   ▸ Student used a checklist to evaluate whether each component was included during probe

   ▸ If components were missing, the teacher initiated prompt sequence

   ▸ Student graphed independent correct responses

---
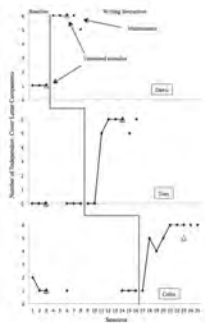
OTHER COOL NARRATIVES

▶ Text Messages

▶ Pennington, Saadatzi, Welch, & Scott (2014)

  ▶ Targeted Sending a Text message with a greeting, statement about oneself, and a closing

  ▶ Robot used SP

    ▶ Two student required self graphing

TEACHING TO TEXT

▶ Daily probe

  ▶ Teacher prompted student to text R.P.

  ▶ Each day, robot instructed students write each step in chain of responses.

  ▶ Robot played reinforcing song

  ▶ Two of the students required addition of self evaluation component

---
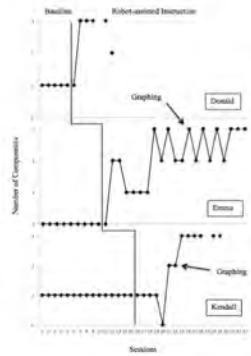
THANK YOU!

robert.pennington@uncc.edu