

WRITE ON! TEACHING WRITTEN EXPRESSION TO LEARNERS WITH COMPLEX COMMUNICATION NEEDS

Robert Pennington PhD BCBA-D



COMMUNICATION

- There is no more important a repertoire in lives of people
- The way we communicate with others ultimately determines our quality of life
- Should be a primary focus of education, resting at the core of all programming for students with extensive support needs.

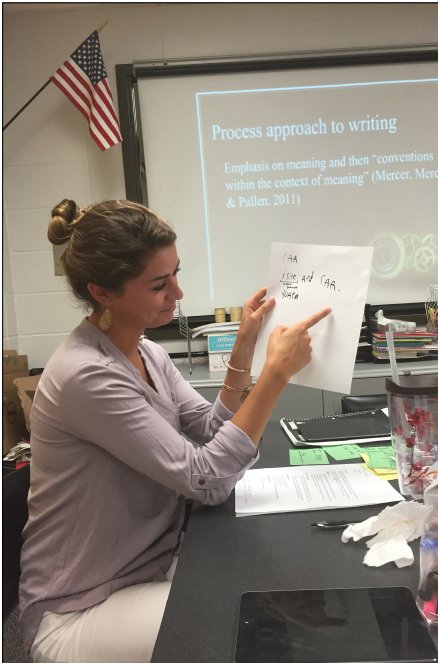


ITS IMPORTANCE

- Has resulted in a robust body of research and evidence-based practices
- We likely have fallen short in successful dissemination and systems change

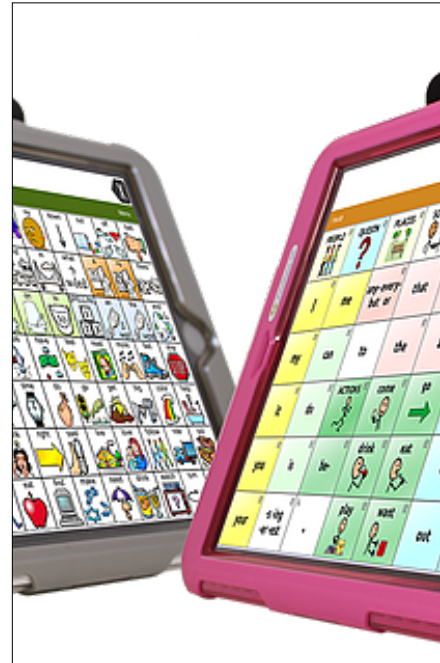
WRITTEN COMMUNICATION

- Is another story,
 - Not a happier one
- There has been much less research on written expression for students with extensive support needs, including those with limited vocal, signed, or picture-based communication skills
- As a result, there has little guidance for practitioners (Pennington & Carpenter, 2019)



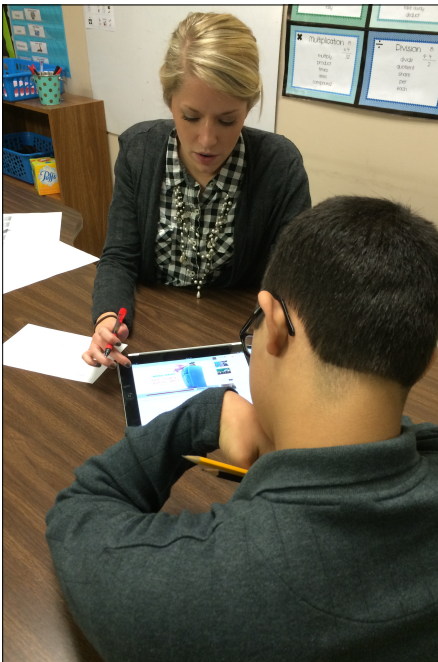
WHY CARE ABOUT WRITING?

- The written word is powerful in that it serves to communicate a message to a reader, that is unwavering, lasting, and wrought in the crucible of thought and revision.
- In a literate community it is the second most understood response topography



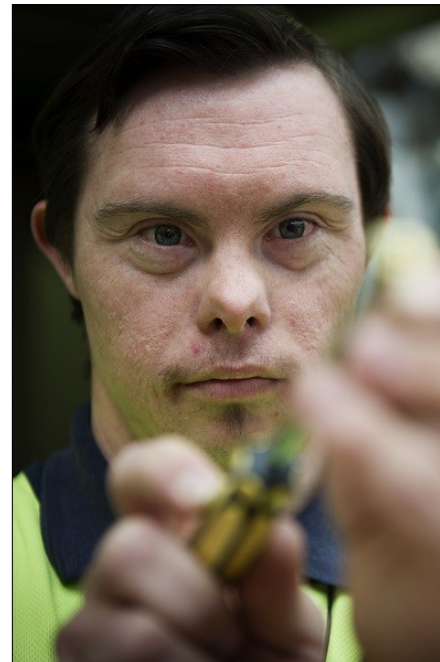
WHY CARE ABOUT WRITING?

- Many students that use AAC fail to move beyond single word selections
- Writing instruction might help



WHY CARE ABOUT WRITING?

- Writing is a vehicle for transmitting what you know from kindergarten to post secondary educational settings
- And in many cases students are required to meet standards in writing.



WHY CARE ABOUT WRITING?

- Writing is a pathway to employment from application to task performance and documentation of one's efforts



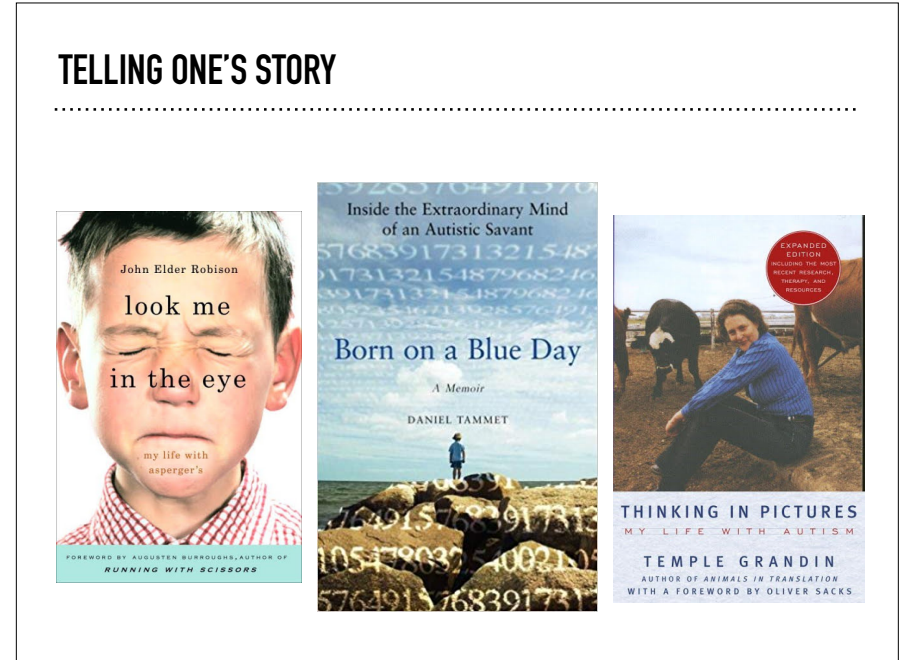
WHY CARE ABOUT WRITING?

- Writing is a vehicle for interaction and a doorway to inclusion



WHY CARE ABOUT WRITING?

- Writing is a means for telling one's own story

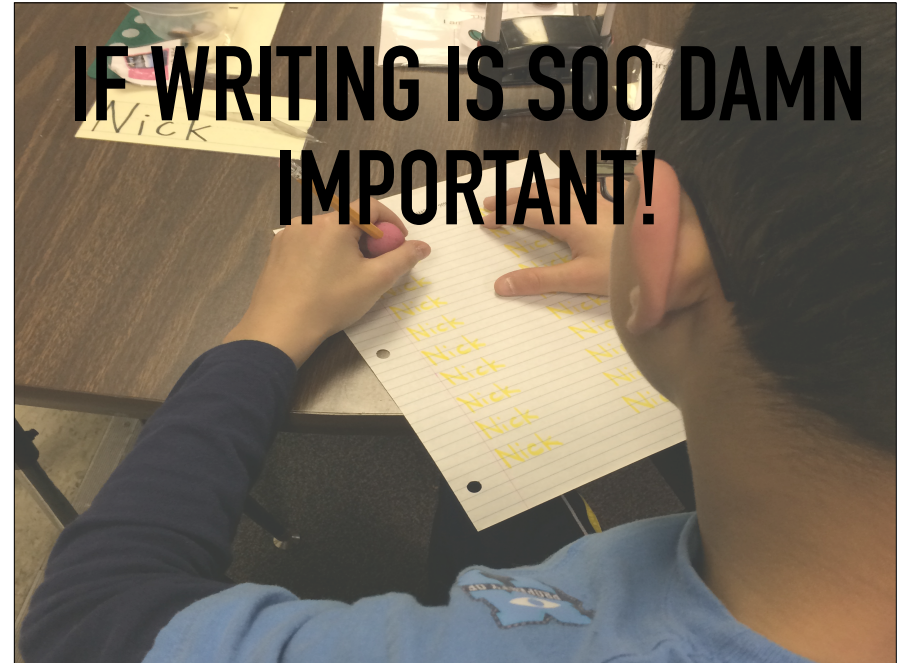




WHY CARE ABOUT WRITING?

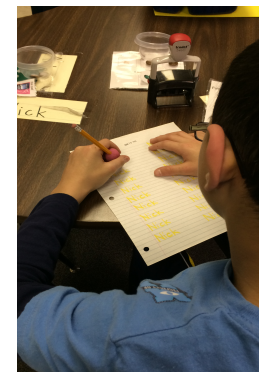
- The absence of writing instruction and research, leaves space for pseudoscientific practices such as facilitation communication and rapid prompting

Not Writing



MAYBE WE HOLD ON TO OLD IDEAS ABOUT THIS POPULATION, BECOMING THOSE PEOPLE WE NEVER IMAGINED

THE OVERLORD OF LEAD LABOR



GIT' ER DUNNER



CAN'T DO, CATHY



WRITING IS HARD

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

Benjamin September 2002
Championship
When it was the last game of the
Championship. On the first play I
fake hand it to the runningback
but I ran the ball. The next play
I passed it. The Defense caught it.
The End

STUDENTS WITH COMPLEX COMMUNICATION CHALLENGES

- Often require a great deal of support





CHILDREN WITH CCN

- ▶ Face challenges
 - ▶ Language Development
 - ▶ Motor Skills
 - ▶ Reading Skills
 - ▶ Social Skills
 - ▶ Experience and Opportunities to Write

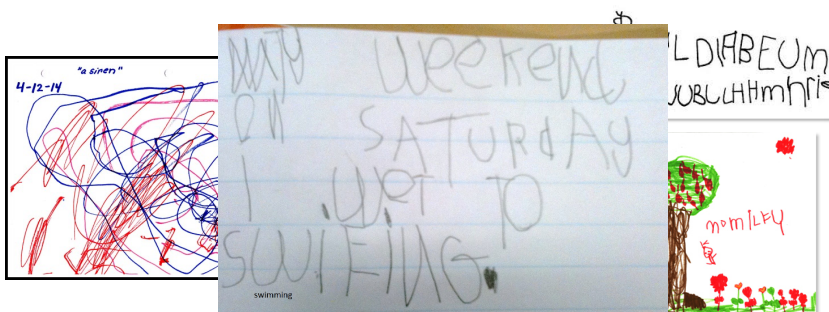


CHILDREN WITH CCN

- ▶ Much like vocal language, written expression is gradually shaped by its environment
- ▶ But unfortunately, many children with CCN may not have conventional responses that are recognized or shaped

WRITING IS SHAPED

- ▶ Writing starts early and seems to progress in loose stages (Sulzby, E., & Teale, W. "Writing Development in Early Childhood." *Educational Horizons*, Fall, 1985, 8-12.



HAVE WE STOOD IN THE WAY?

- ▶ Our knowledge
 - ▶ Lack of research evidence
 - ▶ Training
 - ▶ Lack of emphasis on writing

HAVE OUR PERCEPTIONS ABOUT WRITING HELP US BACK

- Many view written responses as waiting “inside the speaker”
- Suggesting a sophisticated internal “writer”

The Behavior Analyst 1981, 4, 1-7 No. 1 (Spring)

HOW TO DISCOVER WHAT YOU HAVE TO SAY—
A TALK TO STUDENTS
B. F. Skinner
Harvard University

COMPLEXITY OF WRITING

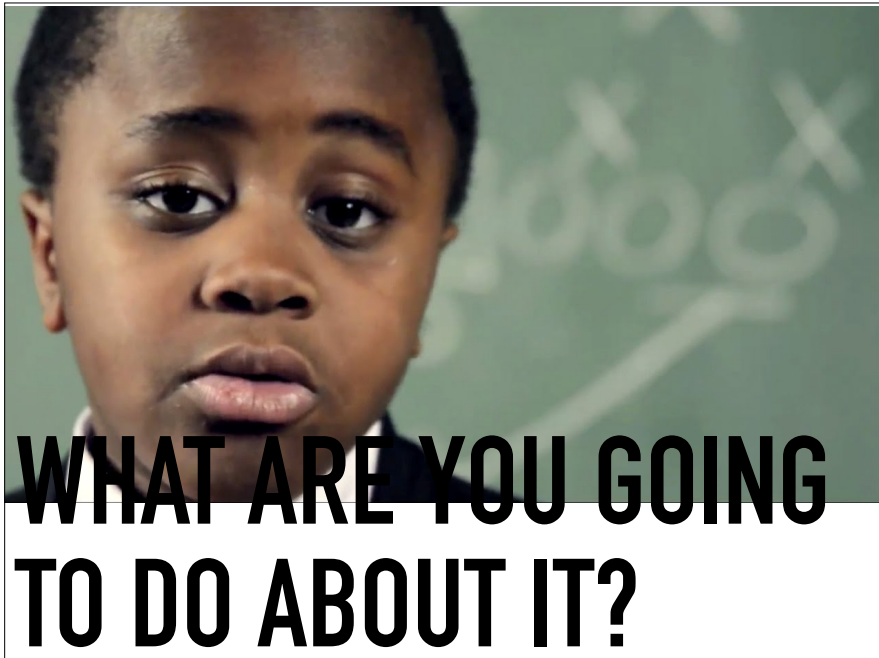
US

STUDENT DIFFERENCES

POOR ACHIEVEMENT IN WRITING

ONLY 27 % OF STUDENTS PERFORM AT PROFICIENT LEVELS

80% AT BASIC LEVEL



WHAT IF WE MADE WRITING MEANINGFUL

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



मन्दबुद्धि

MEANINGFUL?

- We consider those important contingencies (reasons) for writing behavior



Let me get that for you!



WRITING IS AN INTERACTION BETWEEN A WRITER AND A READER

MEANINGFUL

PUT YOUR
NAME
ON YOUR
PAPER

TEACHER
PRAISE

PARENT
PRAISE

EVOKES A WRITING
RESPONSE

WRITER
WRITES

SOME REINFORCING
CONSEQUENCE
(MEDIATED BY A
READER)

ENJOYMENT

"TEXT"
HEY GURL,
WHAT'S UP!

TANGIBLE

PEER
PRAISE

MEANINGFUL

PAPER AND PENCIL

WRITE

(ENJOYMENT)
AUTOMATIC SR

PAPER AND PENCIL
AND FAVORITE SNACK

WRITE

ACCESS TO SPECIFIC
CONSEQUENCE

TEACHER DIRECTIVE
TO WRITE

WRITE

ACCESS TEACHER
FEEDBACK
OR AVOID NEGATIVE
FEEDBACK

MEANINGFUL ROUTE



Vocal Behavior

REQUESTS

LABELING

CONVERSATION

Writing Behavior

WRITING FOR ACCESS

WRITING ABOUT THINGS YOU SEE

WRITING ABOUT THINGS YOU KNOW



TEACHING REQUESTS

- Only communication behavior that directly benefits the speaker
- Establishes powerful link with partner
- May condition activities in which requests are reinforced
- May reduce problem behavior

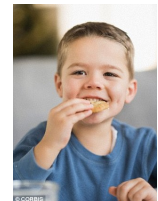
WRITING AND REQUESTING

- We might teach students to exchange, copy, or write words for specified reinforcer



Cookie

Coo k i e



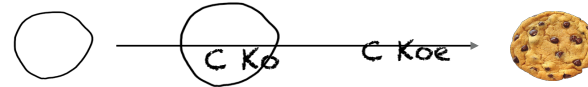
WRITING AND REQUESTING

- Signing in and out of activities
- Writing messages to their peers
- Playing waiter
- Googling



SHAPING EARLY WRITING RESPONSES

- Shaping- the reinforcement of successive approximations to a terminal goal
- Present reinforcing stimulus and a gentle prompt to write



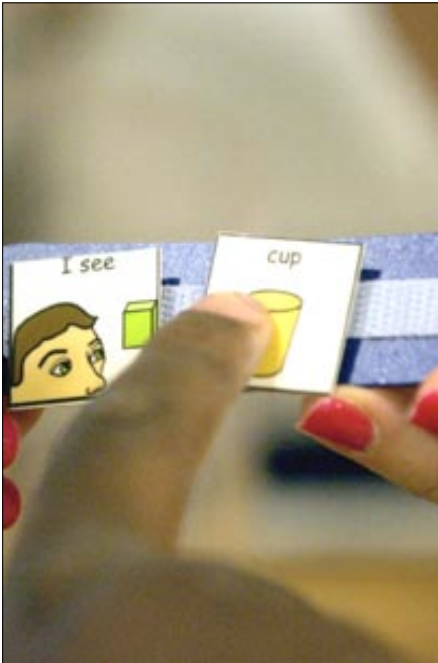
USE PEERS

- As communicative partners
- As co-writers

- Collins, Branson, Hall & Rankin, (2001) used peers to teach letter writing in general education settings
- Bedrosian, Lasker, Speidel, & Politsch (2003) used peers to plan narratives with an AAC user

“

Discuss with your partners ways to increase motivation for writing.



WORDS ABOUT WORDS

- Some students will to acquire the skills to produce conventional written narrative
- Writing might involve the use of picture, heavy technology supports, peer supports for writing, written approximations

TEXT CAN BE MADE UP OF ALL SORT OF UNITS



The ball is red									
I see a			I want a			Ball			
I		red		see		Car			
A	C	G	T	I	D	O	P	A	

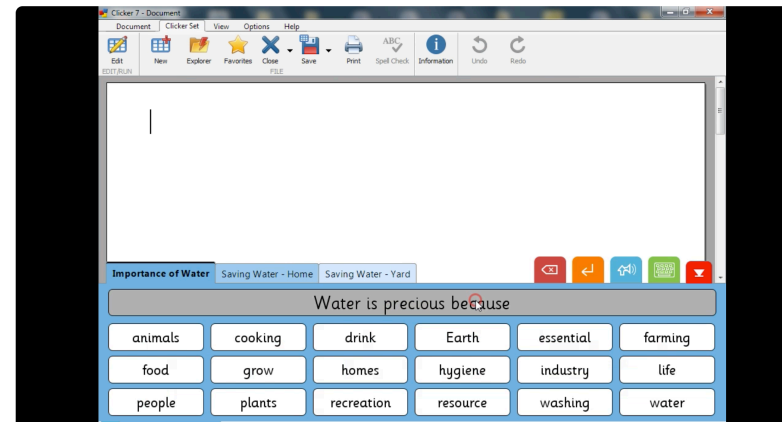
SAMPLE TOOLS: CLICKER SENTENCES

Clicker Sentences for iPad

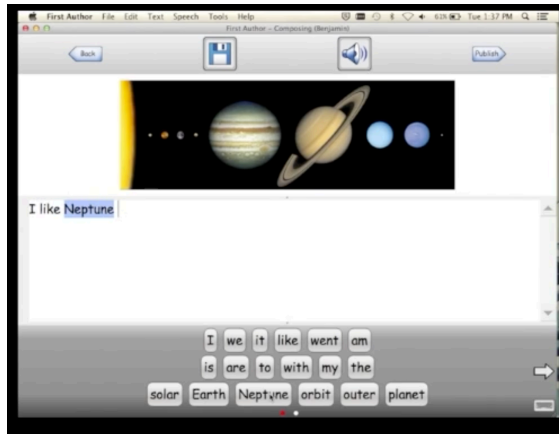


SAMPLE TOOLS: CLICKER

From planning, to writing, to proofing - Clicker includes all the tools your students need to succeed.



SAMPLE TOOLS: FIRST AUTHOR



TEACHING COPYING SKILLS

- Copying is a powerful skill for independence in writing
- Students with and without disabilities reference environmental models
- Teacher can use written models as prompts.

AGAIN, POTENTIAL CONTEXT FOR TEACHING COPYING

- Ordering snacks for requests
- Copying words to find google image or high value youtube videos or games



TEACHING SPELLING





SPELLING IS HARD

- 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)

ASSESSING STUDENTS' SPELLING

- Correct words spelled
- Correct letter sequences

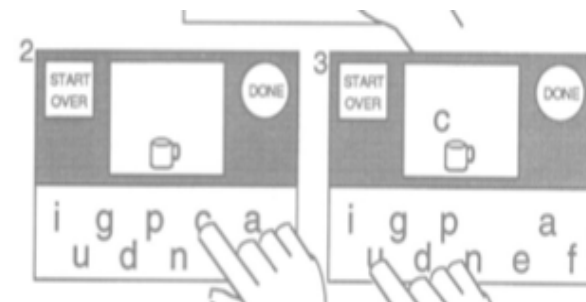
Word	Student Answers	CLS	CLS Score	WSC Score
summer	summer	ˆsˆuˆmˆmˆeˆrˆ	7	1
	sumer	ˆsˆuˆmˆeˆrˆ	5	0
won't	won't	ˆwˆoˆnˆ'ˆtˆ	6	1
	wont	ˆwˆoˆnˆtˆ	4	0

DATA

- Given a written prompt Name _____, Micheal will write his name with
- Mchl
 - (0 word, 3 CLS)
- Michl
 - (0 word, 5 CLS)
- Mcheal
 - ?

SPELLING RESEARCH

- Early literature focused on match to sample tasks
 - (Stromer et al., 1997; Takayuki et al., 2012; Vedora & Stromer, 1997; Sugawara & Yamamoto, 2007)



SPELLING RESEARCH

- Most strategies capitalize on students' copying or matching skills
 - Chaining
 - Cover cover compare

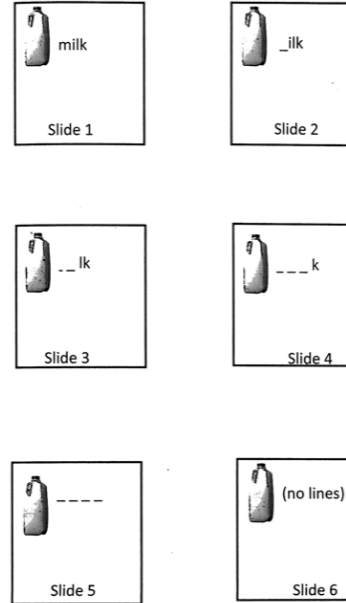


Figure 4. Example of slide progression using the forward chaining procedure.

CHAINING

- Forward Chaining
 - Purrazzella and Mechling (2013)
 - Gradually increasing response requirement
 - Time consuming
 - Might be best for teaching frequently used words (e.g., name)

“CHAINING”

Rqztl
 _qztl
 _ _ztl
 _ _ _tl
 _ _ _ _l
 _ _ _ _ _

COPY-COVER-WRITE

- 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

1. green	green	green	green
2. blue	blue	blue	
3. red	red	red	
4. yellow	yellow	yellow	yellow
5. black	black	black	black

Fold here
Cover

**TEUTONIC
CURMUDGEON
NICOISE**

SOME STUDENTS MAY NOT ACQUIRE STRONG SPELLING SKILLS



**SENTENCE
WRITING**

KEEP IN THE BACK OF YOUR MIND

- What purpose should writing serve
- And upon what units, should I build instruction
 - Letters
 - Words
 - Sentences
- How will students produce texts



THE SENTENCE

- Sentences are miniature compositions (Saddler, 2012)
- They serve to illuminate controlling variables or function for the emission of the sentence

I want a
I see a

INFORMAL ASSESSMENT FOR MORE COMPLEX PRODUCTS

- Correct Writing Sequences
 - Count the number of correct relations between two adjacent units. Each word and essential punctuation is a separate unit. Words must be spelled correctly and sequences must be grammatically correct and make sense

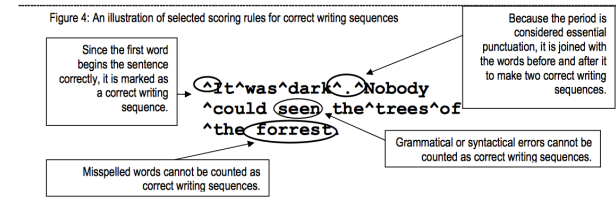


Figure 5: CBM Writing sample scored for Correct Writing Sequence (Each correct writing sequence is marked with a caret (^)).

^I woud drink^water^from^the^ocean	5 correct writing sequences
^and^I woud eat^the^fruit^off^of	6 correct writing sequences
^the^trees^.^Then^I woud bilit a	5 correct writing sequences
^house^out^of^trees, ^and^I woud	6 correct writing sequences
gather^firewood^to^stay^warm^.^I	6 correct writing sequences
woud try^and^fix^my^boat^in^my	6 correct writing sequences
^spare^time^.	3 correct writing sequences
	Total = 37 correct writing sequences

START WITH PREDICTABLE ROUTINES

- Determining the routine to teach
 - What is the simplest structure that can be used to communicate there intended message?
 - What constitutes a resume cover letter, simple story, and text message?

Sample template
 Robot went to space.
 Robot saw Yoda
 Robot was happy
 Spongebob went to school
 Spongebob saw friends
 Spongebob was happy

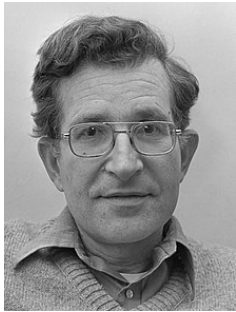
Once there was a _____ He
 lived in the _____ One day _____

 Then _____

 _____ felt _____
 The end.

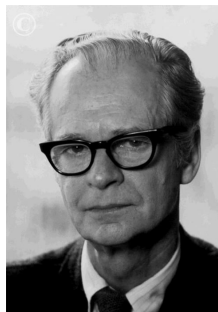
PREDICTABLE ROUTINES

- Syntactic Structures or Autoclitic frames
 - Patterns that serve as structures in writing upon which to develop content



SYNTAX
FORMAL PROPERTIES!

AUTOCLITICS
FUNCTIONAL
PROPERTIES!



PREDICTABLE ROUTINES

- They may facilitate communication

I see a cat

I see a cow

I see a _____

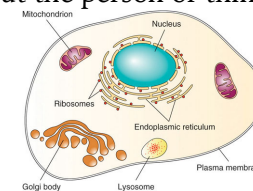
↙
Common stimuli

PREDICTABLE ROUTINES

- Unsupported routines
 - Students are presented routines during instruction and expected to generate narrative independent of visual organizers
- Visually supported routines
 - Students supports and organizers throughout process

SCOPE AND SEQUENCE FOR SENTENCE WRITING

- Teach the rule: A sentence names somebody or something and tells more about the person or thing (Kameenui & Simmons, 1990)
- Then, selecting sentences that name somebody or something and tell more about the person or thing depicted in the picture



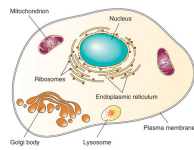
I SEE A DOG

I SEE A CELL

I SEE SEE SEE

SCOPE AND SEQUENCE FOR SENTENCE WRITING

- ▶ Prompting selecting sentences:
 - ▶ System of Least Prompts
 - ▶ Level 1-Independent
 - ▶ Level 2- What is it?
 - ▶ Level 3- ___ is the person or thing and _____ tells more



I SEE A DOG

I SEE A CELL

I SEE SEE SEE

SCOPE AND SEQUENCE FOR SENTENCE WRITING

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



- ▶ The man _____

FLIPS

EATS

EATS

SCOPE AND SEQUENCE FOR SENTENCE WRITING

- ▶ Prompting selection: Time delay



- ▶ The man _____

FLIPS

EATS

EATS

SCOPE AND SEQUENCE FOR SENTENCE WRITING

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



I A SEE COW
FROG TRAIN WHALE THE

SCOPE AND SEQUENCE FOR SENTENCE WRITING

- 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. (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.

WRITE A SENTENCE ABOUT
THE PICTURE



XIX ZTZTT FISH

WRITE A SENTENCE ABOUT
THE PICTURE



XIX ZTZTT DOG

WRITE A SENTENCE ABOUT
THE PICTURE



XIX ZTZTT COW

WRITE A SENTENCE ABOUT
THE PICTURE



GENERAL PROCEDURES

VISUAL STIMULUS
+
DIRECTIVE

MODEL
PROMPT
(VARIATIONS)

WRITING
RESPONSE

IMMEDIATE
CONSEQUENCES

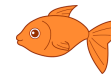
GENERAL PROCEDURES

► Teaching sentences (Pennington, Flick, & Smith-wehr ,2018)

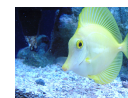
WRITE A
SENTENCE ABOUT
WHAT YOU WANT



WRITE A
SENTENCE
ABOUT WHAT YOU
SEE



WRITE A
SENTENCE
ABOUT THE

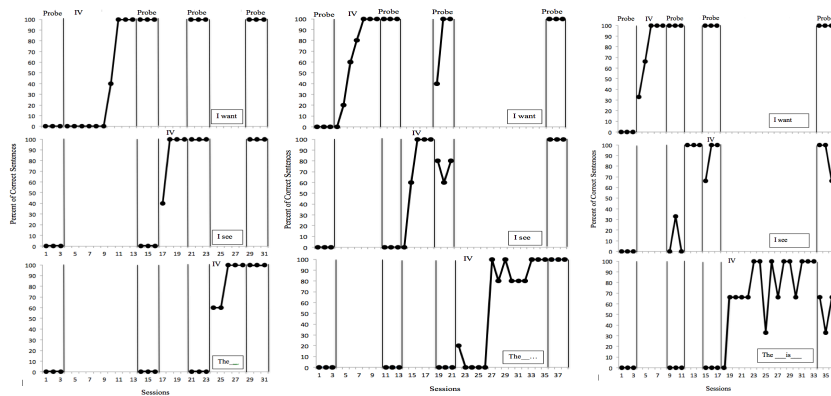


I want a chip



	candy	see	a
dog	want	chip	game
the	car	tree	fish

WHAT WE FOUND



THE GOOD STUFF

- 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

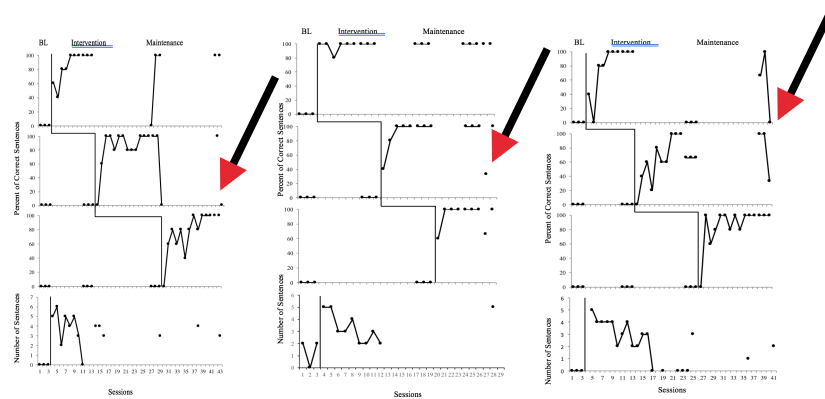
GENERAL PROCEDURES

- Teaching Sentences (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 ET AL., 201

The diagram illustrates the 'Write a Sentence' intervention. It shows three examples of prompts (e.g., "WRITE A SENTENCE TELLING ME WHAT ___ LOOKS LIKE") next to an orange fish illustration. To the right, a box contains the sentence "DTHE FISH IS ORANGE". Below, a cartoon girl character is shown next to another prompt ("WRITE A SENTENCE TELLING ME ___ IS DOING") and a fish illustration. To the right, the sentence "The fish is" is written in a cursive font.

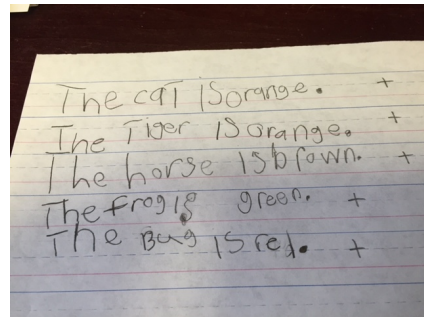
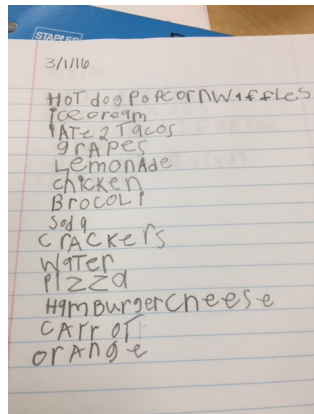
RESULTS



HOUSTON, WE HAVE A PROBLEM

- ▶ In stimulus control
 - ▶ Write about what the animal
 - ▶ Looks like
 - ▶ Is doing
 - ▶ Feels

The bug is red



TEACHING SENTENCE WRITING

- ▶ 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

TEACHING SENTENCE WRITING



WRITE A SENTENCE ABOUT THE PICTURE



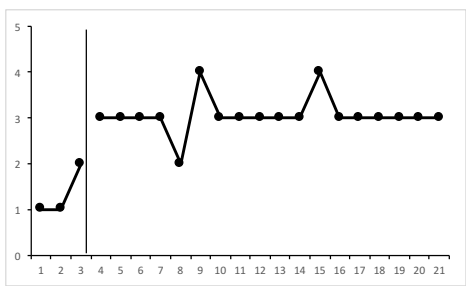
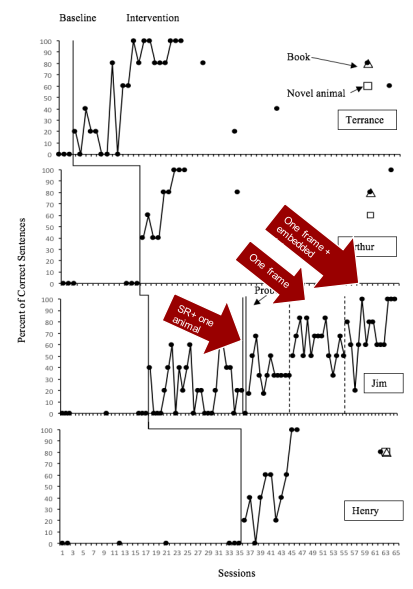
DTHE MONKEY EATS

SLP

DTHE MONKEY EATS
want a chip

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

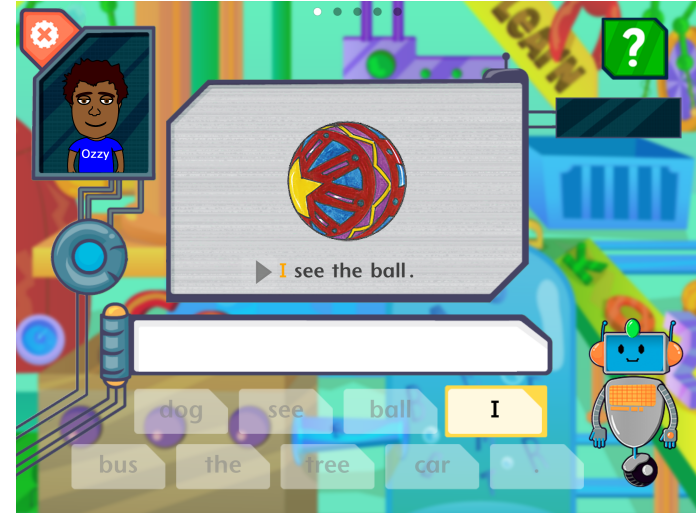
RESULTS



USING TECHNOLOGY

GoWrite Prototype

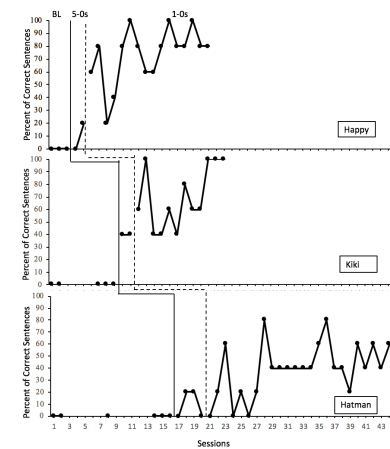




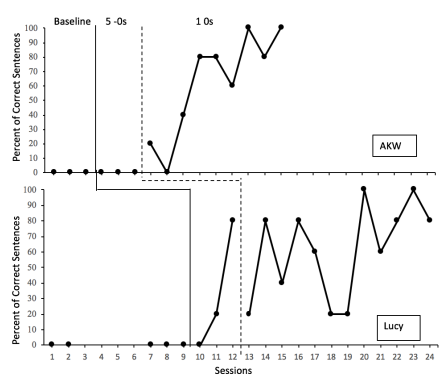
PENNINGTON ET AL., 2019

Participant	Race & Gender	Age	Disability Category	Intellectual Functioning
Happy	White, Female	15 years	Moderate ID	DAS-2 52
Kiki	White, Male	17 years	Moderate ID	RIAS-57
Hatman	White, Male	21 years	ASD, Severe ID	DAS-2 30
AKW	Black, Female	10 years	Moderate ID	DAS 49
Lucy	Black, Female	10 years	Moderate ID	WISC-5 40
Dino	Black, Male	8 years	ASD, ID	DAS-2 57
Monkey	Hispanic, Male	9 years	ASD, Moderate ID	DAS-2 50
Thomas	White, Male	8 years	ASD, Moderate ID	SB 42

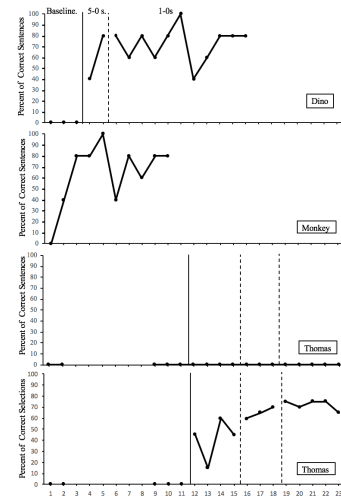
GROUP 1



GROUP 2



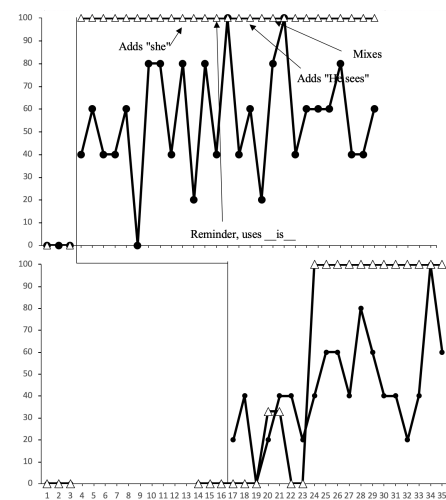
GROUP 3



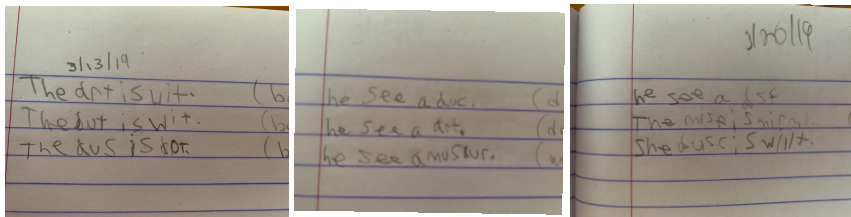
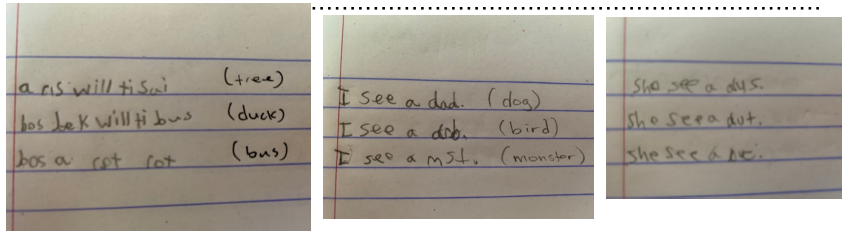
REPLICATION: RURAL

- Purpose : To assess the effects of Gowrite on generalized responding across topographies
- Participant 1: Jazzy
 - Age 9, Grade 4
 - ID-mild
 - Writing score <40 (Woodcock Johnson-IV)
- Participant 2: Tyler
 - Age 6, Grade K
 - Developmental Delay

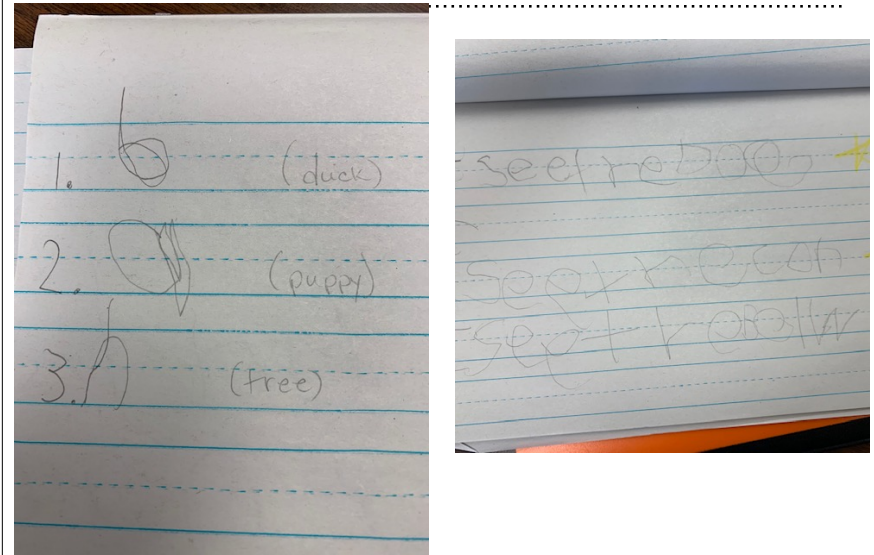
RESULTS



JAZZY

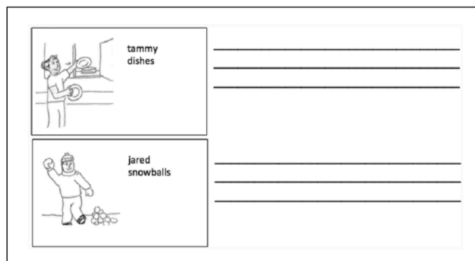


TYLER



OTHER STRATEGIES

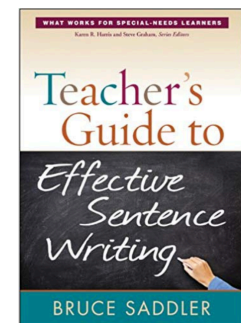
- Presentation of a picture
 - Model a Sentence
 - Ok, lets write one together
 - Let's see if you can try!



Datchuk & Kubina, 2012

INCREASING SENTENCE QUALITY

- Sentence Combining Strategy
 - Teaches students to manipulate words when planning for sentences
 - The dog is brown
 - The dog barks
 - The brown dog barks



INCREASING SENTENCE QUALITY

- Sentence Combining Strategy(Cued Exercises)
 - Underlined clue
 - The dog barks.
 - The dog is brown.

INCREASING SENTENCE QUALITY

- Sentence Combining Strategy(Cued Exercises)
 - Key words in parenthesis
 - The dog barks.
 - He is hungry (because)

INCREASING SENTENCE QUALITY

- Sentence Combining Strategy
- Saddler's suggestion of a possible sequence
 - Inserting adjectives and adverbs
 - Producing compound subjects and objects
 - Mary likes beer.
 - Fred likes beer.
 - Mary and Fred like beer.
- Compound sentences with "and" and "but"

INCREASING SENTENCE QUALITY

- Saddler's suggestion of a possible sequence (cont)
 - Possessive noun's
 - I like cats
 - The cat is Kevin's
- Adverbial clauses with connecting words after, because, until and when

“

Describe procedures for teaching sentence writing

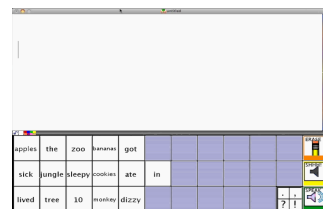


STORY WRITING

STORY WRITING (SYSTEMATIC INSTRUCTION & FRAMES)

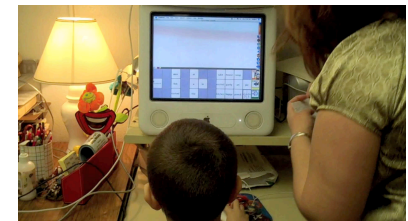
- Pennington, Ault, & Schuster, & Sanders, 2011; Pennington, Collins, Stenhoff, Turner, & Gunselman, 2014; Pennington, Stenhoff, Gibson, & Ballou, 2012
- Used selection-based writing software and simultaneous prompting to teach students to write simple 3 to 4 sentence stories

Sample template
Robot went to space.
Robot saw Yoda
Robot was happy.
Spongebob went to school.
Spongebob saw friends
Spongebob was happy.



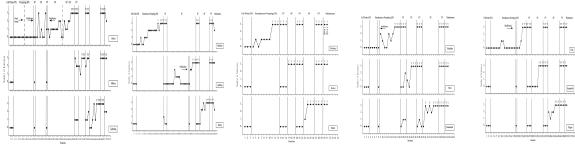
STORY WRITING (SYSTEMATIC INSTRUCTION & FRAMES)

- Probe prior to instruction
 - “Write a story”
- Simultaneous Prompting
 - Prompt students through 3 versions
 - Play digital reading of the story.



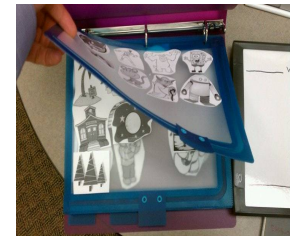
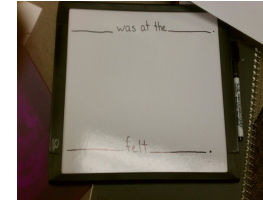
STORY WRITING (SYSTEMATIC INSTRUCTION & FRAMES)

- Results
 - Students wrote a combined 53 stories
 - All students acquired new sight words
 - Students demonstrated 100% comprehension
 - All students demonstrated some generalization across response topographies



STORY WRITING (SYSTEMATIC INSTRUCTION & FRAMES)

- Unpublished
 - Let's work on writing a story today.
 - First, we need a character
 - Who 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 (SYSTEMATIC INSTRUCTION, FRAMES, MODEL)

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

3-15-11

Can I read on the
Koeputr

Dwayne Wade
is and Kobe Bryant
is is and
The
SoeMBcap.
And day are in
The Stadium.
they are
Happy.

I was playing games in my room.
I was playing an action game in my room but my mom told me to stop playing but I did not listen.
I got angry because I did not listen to my mom's words.
I felt sad.



OTHER NARRATIVES

RESEARCH TO PRACTICE

- ▶ Build instruction around students' recorded life events
- ▶ Movie versions of books read in a general education class
- ▶ Provide students option of topic around which to generate a story- have them plan and record events.

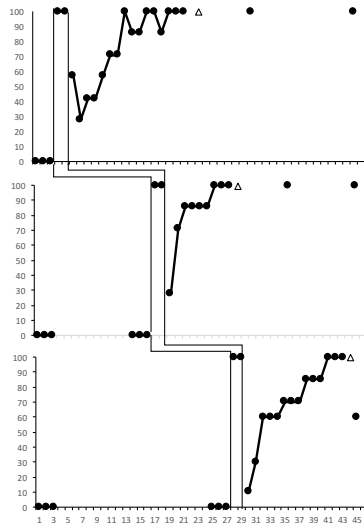
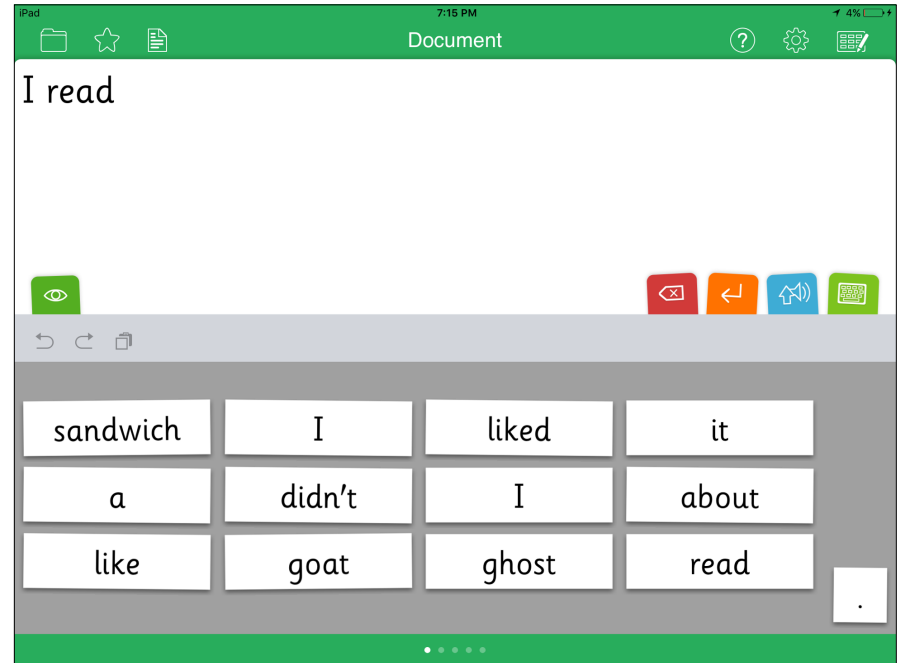
WRITING OPINIONS IN RESPONSE TO TEXT

- ▶ Pennington, Mohammad, & Mims (In Press, 2020)
 - ▶ 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)

WRITING OPINIONS IN RESPONSE TO TEXT

- 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	-



WRITING OPINIONS IN RESPONSE TO TEXT

- Opinion Paragraph Writing
 - Mims, Sears, Mims, & Wagner (in preparation)
 - Replication of Mims et al. (in press)
 - In stand along App (*Access: Writing* by Attainment Co.)- Created opinion paragraphs after reading of adapted version of *Holes*
 - Three 5th grade students with severe ID &/or Autism

Chapters 1 & 2
Opinion

▶ I will write about Stanley Yelnats, who is a main character.

▶ An opinion is what you think, feel, or believe. What is your opinion about... Stanley Yelnats.

- I think Stanley was lucky.
- I think Stanley was unlucky.
- there were mean wild dogs that scared Karana

Chapters 1 & 2
Conclusion

✓	Introduction
✓	Opinion
✓	Reason 1
✓	Reason 2
	Conclusion

▶ Write the sentence for conclusion:

▶ In _____ Annemarie had a _____ childhood than most people.

conclusion, **different**

Chapters 1 & 2
Conclusion

▶ I will write about Annemarie, who is a main character. I think Annemarie had a different childhood. Annemarie had a different childhood because soldiers stopped her and her friend for running in the street, but growing up with soldiers on the streets was uncommon for most children. Annemarie also had a different childhood because during the war her family had no butter or sugar for their table.

Conclusion

▶ A conclusion is the last sentence and a summary of the paragraph. Which phrase is the best conclusion? In conclusion, _____.

- A pencil.
- It was smart that Karana attacked the wild dogs.
- Annemarie had a different childhood than most people.

Chapters 1 & 2

▶ I will write about Annemarie, who is a main character. I think Annemarie had a different childhood. Annemarie had a different childhood because soldiers stopped her and her friend for running in the street, but growing up with soldiers on the streets was uncommon for most children. Annemarie also had a different childhood because during the war her family had no butter or sugar for their table. In conclusion, Annemarie had a different childhood than most people.

Print

WRITING ABOUT TEXT

- Lee, Browder, Hawley, Flowers & Wakeman (2016).
 - Two students with ID IQ 60,70
 - Taught students to identify ideas in a passage, then transfer to graphic organizer and then to text

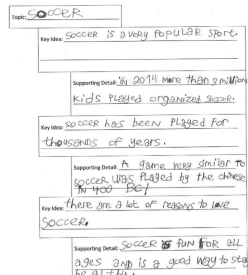


Figure 1. Sample graphic organizer.

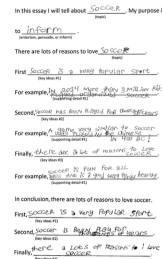


Figure 3. Sample writing exemplar.

In this essay I will tell about _____ (topic). My purpose is to _____ (entertain, persuade, inform). There are lots of reasons to like _____ (topic).

First, _____ (Key idea 1). For example, _____ (support detail).

Second, _____ (Key idea 2). For example, _____ (support detail).

Finally, _____ (Key idea 3). For example, _____ (support detail).

In conclusion, there are lots of reasons to love _____ (topic).

First, _____ (Key idea 1).

Second, _____ (Key idea 1).

Finally, _____ (Key idea 1).

Adapted from Lee et al., (2016)

GRAPHICS ORGANIZERS

- Need a great deal more research on their effectiveness but....

Teacher reads a story

Teachers read a story

Or

Peer guides student to complete a graphic organizer

Student picks identifies from a field of three an object in the story

Student insert content from GO directly into a template

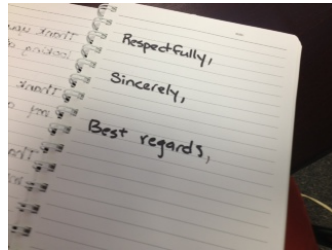
Inserts object or picture of object into template



WRITING FOR WORK

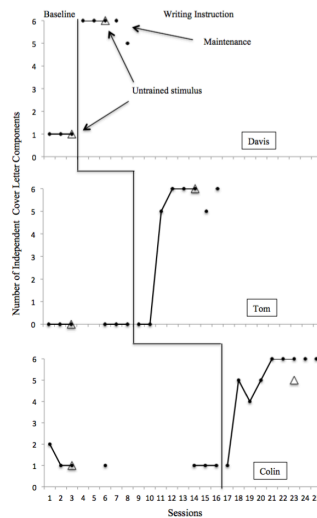
WRITING FOR WORK

- Pennington, Delano, & Scott (2014)
 - 3 high school participants with ID
 - Dependent variables
 - # number of cover letter components
- Independent Variable
- Modeling
- Revision + Prompting
- Self graphing



WRITING FOR WORK

- Daily probes
 - During instruction
 - Student used a checklist to evaluate whether t each component was included during probe
 - If components were missing, the teacher initiated prompt sequence
 - Student graphed independent correct responses



RESEARCH TO PRACTICE

- Practice in small group arrangements
- Work with peers without CCN, to edit finished letters
- Connect letters to mock interview process





WRITING FOR WORK

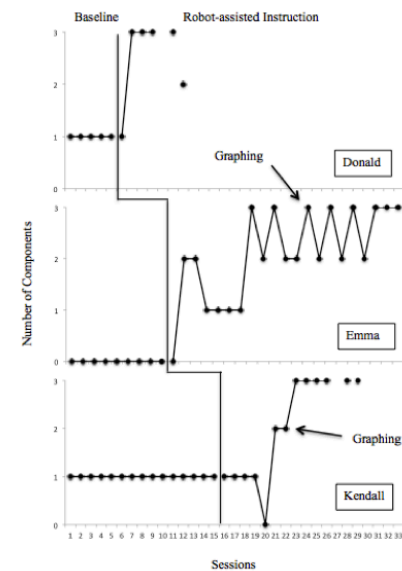
TEXT MESSAGES

- ▶ Pennington, Saadatzi, Welch, & Scott (2014)
 - ▶ Targeted Sending a Text message with a greeting, statement about oneself, and a closing
 - ▶ Robot used SP
 - ▶ Two students required self graphing



TEXT MESSAGES

- ▶ 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

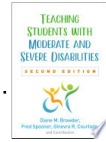


RESEARCH TO PRACTICE

- Just use simultaneous prompting in small group or 1:1
 - No robot required!!
- Use peers without disabilities as communicative partners

MORE RESOURCES FOR PRACTITIONERS

- Pennington, R. C. & Carpenter, M. (2019). Teaching written expression to students with autism spectrum disorder and severe communication impairments. *Topics in Language Disorders*, 39, 191-207.
- Pennington, R. C. (2016). Write on! Using assistive technology and systematic instruction to teach sentence writing to students with moderate to severe disability. *Journal of Special Education Technology*, 31, 50-57.
- Browder, D. M., Spooner, F., Courtade, G. C., & Pennington, R. (In Press). Promoting Writing: Creation of Permanent Product Communications, In D. Browder, F. Spooner, & G. Courtade (Eds.) *Teaching Students with Moderate and Severe Disabilities* (2nd ed.). Abingdon, UK: Routledge.



YOU SURVIVED ME!
ROBERT.PENNINGTON@UNCC.EDU