Evidence-Based Approaches for Treating the Grammatical Weaknesses of Children

Lizbeth H. Finestack, Ph.D., CCC-SLP
Associate Professor, Speech-Language-Hearing Sciences
University of Minnesota
finestack@umn.edu

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- All of the families and children who have participated in our studies and others!

Acknowledgements

- Child Language Intervention Lab:
  - Katherine Bangert
  - Timothy Huang

Conflict of Interest

- Lizbeth H. Finestack received an honorarium for this presentation.

Let's get social!

- Twitter: @lfinestack
- Instagram: lfinestack

bitsfrombytes.com

- Child Language Intervention Lab Website: http://www.finestackclil.com/

Today's Agenda

- Introduction
- Why Grammar
- Explicit vs. Implicit
- Evidence-based Approaches
- Monitoring Progress

Course Description

- In this course, participants will learn how to use both **implicit and explicit approaches** when targeting the **grammatical weaknesses** of children with language impairment.

- Participants will learn at least five different evidence-based techniques for grammatical interventions to integrate into their sessions.

Learner Outcomes

As a result of this course, participants will be able to:

1. Differentiate explicit and implicit approaches that can be used when targeting grammatical forms in intervention;
2. Incorporate at least five evidenced-based intervention approaches into their grammatical interventions; and
3. Systematically monitor progress on grammatical goals.

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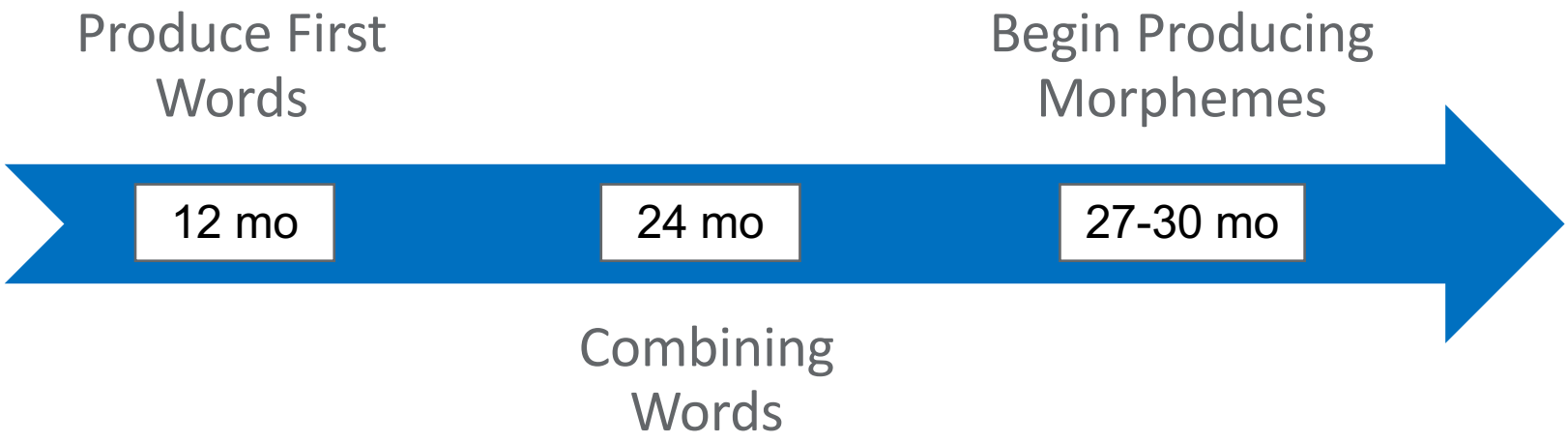
- Introduction
- Why Grammar
- Explicit vs. Implicit
- Evidence-based Approaches
- Monitoring Progress

Why Grammar?

- One area of language that is particularly difficult for many children to master is grammatical language.
  - developmental language disorder/specific language impairment
  - Down syndrome; fragile X syndrome
  - autism spectrum disorder

Typical Language Development



Brown's 14 Grammatical Morphemes
(Brown, 1973)

Stage	Morpheme	Example
II (27-30 mo)	Present progressive -ing Plural -s in	Me playing. That books. Cookie Monster in there.
III (31-34 mo)	On Possessive 's	Doggie on car. Mommy's shoe.
V (41-46 mo)	Regular past Irregular past Regular 3rd person singular Articles a, the contractible copula be	He walked. She came. She plays The cat That's a puppy.
V+ (47-50 mo)	Contractible auxiliary be Uncontractible copula be Uncontractible auxiliary be Irregular 3rd person singular	They're playing. I am coming. Who's here? I am. Who's playing. I am. She has. He does.

Link Between Grammar and Reading
(Scarborough, 2001)

Language Comprehension
- Background Knowledge
- Vocabulary
- Language Structures
- Verbal Reasoning
- Literacy Knowledge

Word Recognition
- Phonological Awareness
- Decoding
- Sight Recognition

https://c2.staticflickr.com/4/3499/3889347802_936bc61c47_z.jpg

Current Practice - 2018

(https://pubs.asha.org/doi/pdf/10.1044/2018_AJSLP-17-0168)

AJSLP

Research Article

Current Practice of Child Grammar Intervention: A Survey of Speech-Language Pathologists

Lizbeth H. Finestack[a] and Kayla E. Satterlund[a]

Purpose: The aim of this study was to better understand current grammatical intervention approaches. Despite grammatical language being a common weakness among children with language impairment, relatively little is known about current grammatical intervention practices of speech-

intervention setting and dosage if resources were unlimited.

Results: We grouped participants based on the ages of children that represent the largest percentage of their caseload resulting in an early education group (n = 114) and an elementary

Current Practice

- 23-question online survey
- Completed by 338 SLPs
  - 114: Early Education
  - 224: Elementary

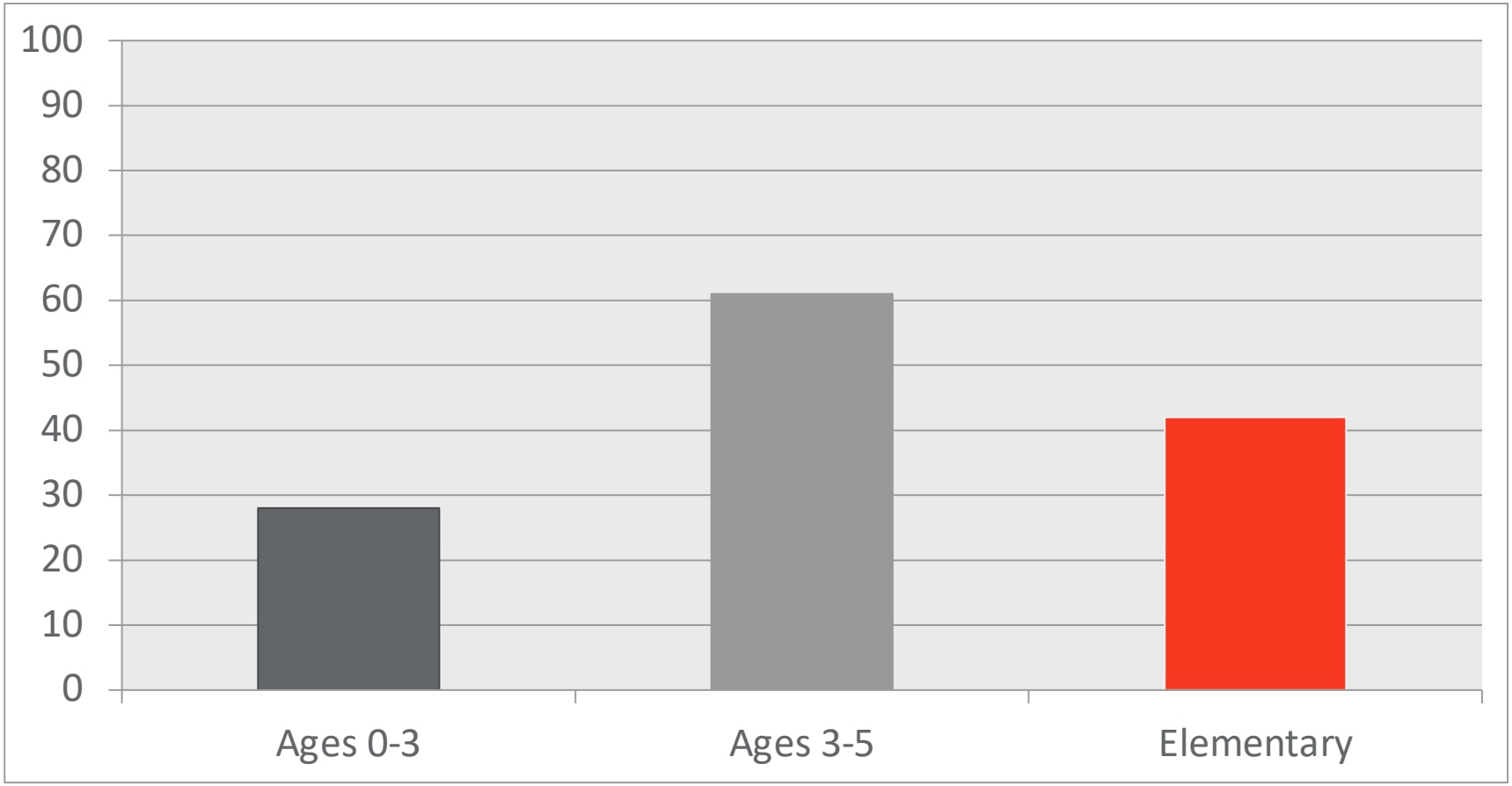
Table 1. Participant demographic information.

Characteristic	Early education (n = 114)	Elementary (n = 224)
Race		
American Indian	0%	< 1%
Asian	4%	1%
Black or African American	4%	< 1%
Hispanic/Latino	0%	< 1%
White or Caucasian	83%	88%
Other	1%	1%
Mixed	2%	5%
Unspecified	5%	3%
Years of Clinical Experience		
Less than 1 year	1%	1%
1–5 years	10%	13%
5–10 years	21%	20%
10+ years	68%	66%
Unspecified	0%	< 1%
Work setting > 50% of the time		
Early childhood/birth to 3 years of age	11%	< 1%
Preschool	27%	2%
Elementary school	2%	70%
Junior high/middle school	0%	< 1%
Private practice	32%	16%
Clinic setting	11%	6%
Medical setting	8%	< 1%
University clinic	< 1%	2%
Other	2%	< 1%
Number of children on caseload		
1–15	33%	12%
16–30	40%	24%
31–45	19%	28%
46–60	6%	27%
61–75	1%	6%
> 76	0%	3%
Unspecified	1%	< 1%

Which population do you primarily serve?

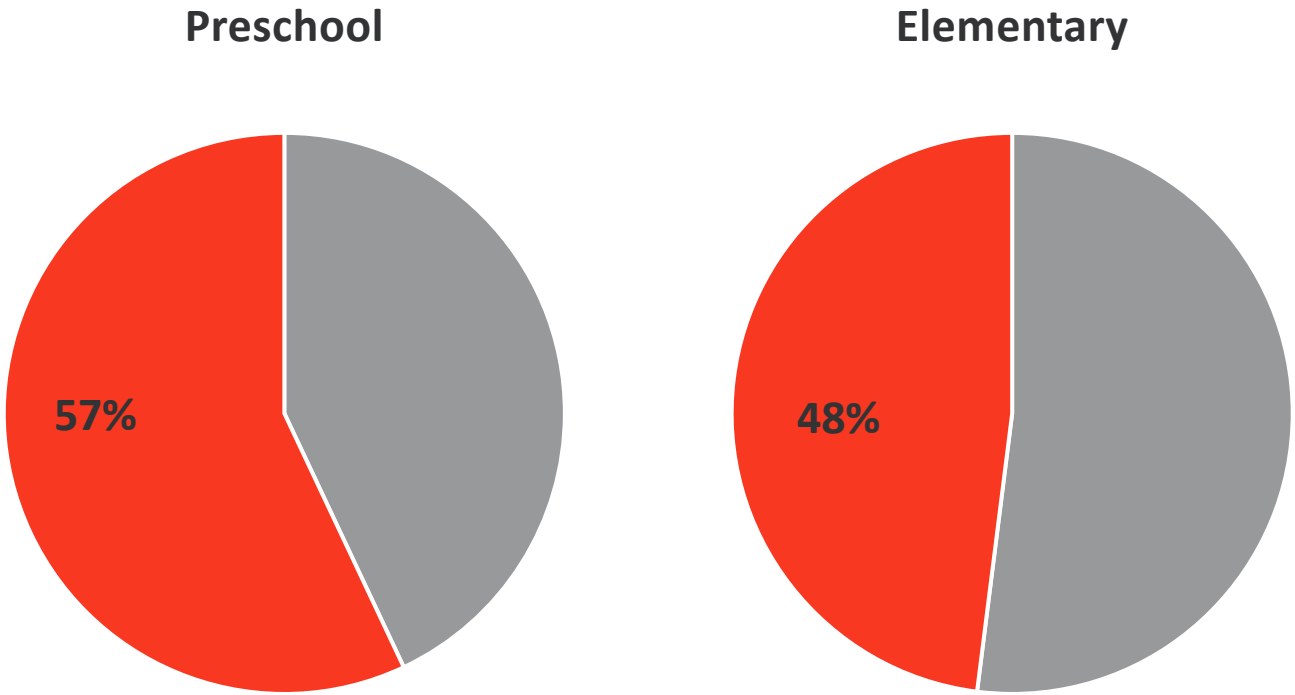
Percent of Caseload with Expressive Grammatical Language Goals

Percent of Caseload with Expressive Grammatical Language Goals



Treatment Time Spent Targeting Grammatical Forms

Treatment Time Spent Targeting Grammatical Forms



Forms Targeted

Table 2. Percent of participants reporting targeting intervention grammatical forms.

Target	Early education (*n* = 114)	Elementary (*n* = 224)
Adjectives	5%	14%
Articles "a," "an," "the"	11%	6%
Auxiliary verbs	15%	12%
Copula "be"	18%	15%
Expanding utterances	25%	**43%**
Negatives	6%	3%
Nouns	5%	8%
Plural *–s*	**56%**	**50%**
Possessive *–s*	**28%**	12%
Prepositions	21%	15%
Present progressive verbs	**55%**	**35%**
Pronouns	**38%**	**51%**
Questions	15%	15%
Regular and irregular past tense	**40%**	**60%**
Regular and irregular third person	3%	6%
Syntax (nonspecific)	4%	6%
Verbs (nonspecific)	17%	29%
Other	24%	26%

Note. Bold-faced values indicate the targets with the greatest number of participant responses.

Clinicians need efficient and effective strategies to use when targeting grammatical forms.

Grammatical Goals

"The basic goal of all grammatical interventions should be to help the child to achieve greater facility in the comprehension and use of syntax and morphology in the service of conversation, narration, exposition, and other textual genres in both written and oral modalities" (Principle 1; Fey, Long, & Finestack, 2003).

"Grammatical form should NOT be the *only aspect of language* and communication that is targeted in a language intervention program" (Principle 2; Fey, Long, & Finestack, 2003).

Aim to increase the child's use of particular grammatical categories such as:

- obligatory use of grammatical subjects
- nominative case pronouns (e.g., *he/she vs. him/her)*
- *auxiliary forms* (e.g., *do/does; am/are/is)*
- *subject–auxiliary inversion* for interrogatives
- subject–verb agreement (e.g., Leo walk*s home)*

"Select *intermediate goals in an effort to* stimulate the child's language acquisition processes rather than to teach specific language forms" (Principle 3; Fey, Long, & Finestack, 2003).

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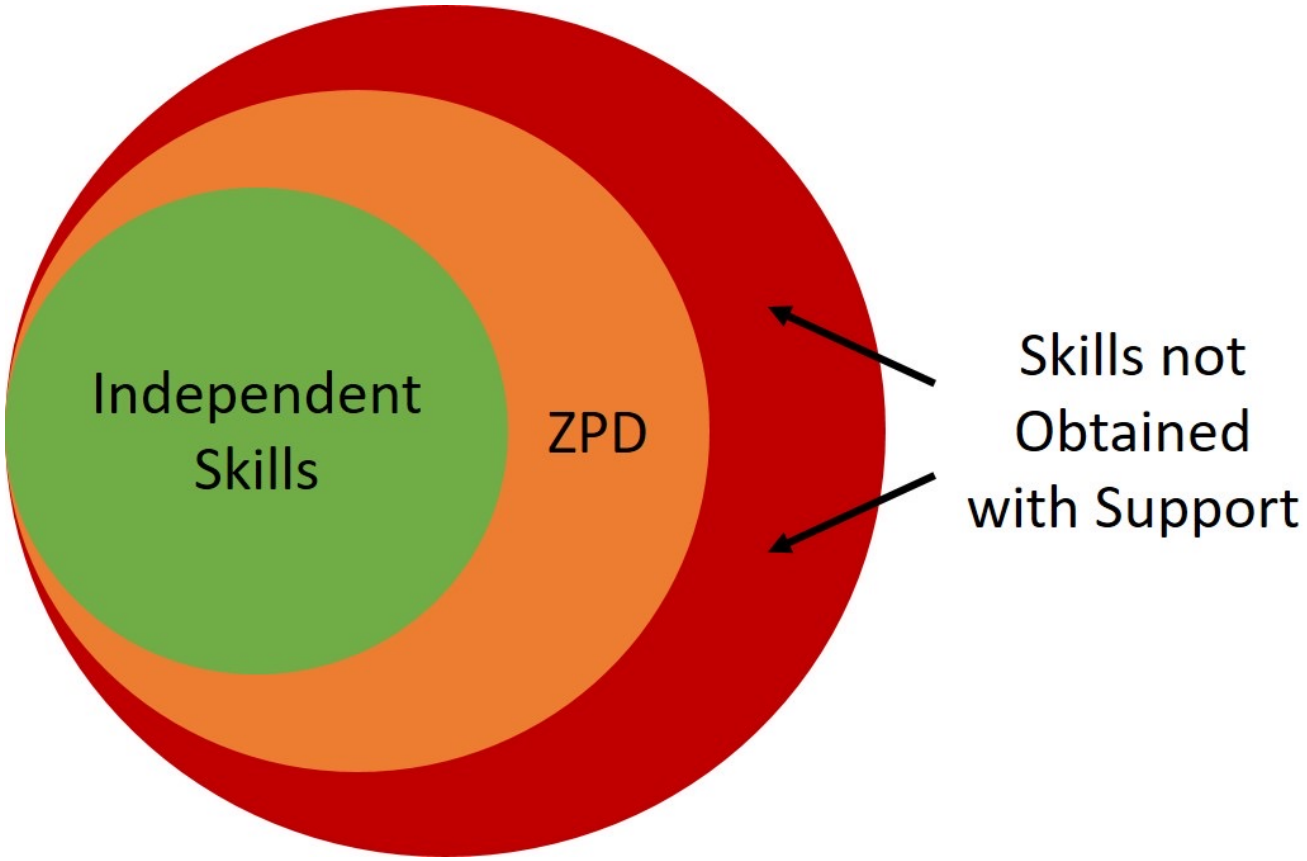
Consider zone of proximal development



SALT - [Tran2 Bound Morpheme Table]

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Tran2 10/30/2017

BOUND MORPHEME TABLE
C&I Verbal Utts
Main Body & Mazes
1st Speaker

	Child			Examiner		
	Number Occurred	Number Omitted	% of Oblig. Context	Number Occurred	Number Omitted	% of Oblig. Context
/'LL	1	0	100.00	2	0	100.00
/'M	4	0	100.00	6	0	100.00
/'S	3	0	100.00	8	0	100.00
/'T	2	0	100.00	---	---	---
/3S	5	8	38.46	3	0	100.00
/ED	2	3	40.00	1	0	100.00
/ING	3	0	100.00	13	0	100.00
/M	0	1	0.00	---	---	---
/S	11	1	91.67	6	0	100.00
/Z	0	1	0.00	1	0	100.00

Possible Grammatical Goal

- Child will produce the third person singular morpheme with 60% accuracy when looks at a picture and describing what each person is doing.

Sample of Developmental Sentence Scoring (Lee, 1974)

Score	Indefinite Pronouns or Noun Modifiers	Personal Pronouns	Main Verbs
1	▪ it, this, that	▪ 1st and 2nd person: I, me, my, mine, you, your(s)	▪ uninflected verb: I see you ▪ copula, is or 's: It's red. ▪ is + verb+ing: He is coming.
2		▪ 3rd person: he, him, his, she, her, hers, its	▪ -s and -ed: plays, played ▪ irregular past: ate, saw ▪ copula: am, are, was, were ▪ auxiliary: am, are, was, were
3	▪ no, some, more, all, lot(s), one(s), two (etc.), other(s), another ▪ something, somebody, someone	▪ plurals: we, us, our(s), they, them their, these, those	
4	▪ nothing, nobody, none, no one		▪ can, will, may + verb: may go ▪ obligatory do + verb: don't go ▪ emphatic do + verb: I do see.
5		▪ reflexives: myself, yourself, himself, herself, itself, themselves	
6		▪ wh-pronouns: who, which, whose, whom, what, that, how many, how much: I know who came. That's what I said. ▪ wh-word + infinitive: I know what to do. I know whom to take.	▪ could, would, should, might + verb: might come, could be ▪ obligatory does, did + verb ▪ emphatic does, did + verb
7	▪ any, anything, anybody, anyone ▪ every, everything, everybody, everyone ▪ both, few, many, each, several, most, least, much, next, first, last, second (etc.)	▪ (his) own, one, oneself, whichever, whoever, whatever: Take whatever you like.	▪ passive with get, any tense ▪ passive with be, any tense ▪ must, shall + verb: must come ▪ have + verb + en: I've eaten. ▪ have got: I've got it.
8			▪ have been + verb + ing ▪ had been + verb +ing ▪ modal + have + verb + en: may have eaten ▪ modal + be + verb + ing: could be playing ▪ other auxiliary combinations: should have been sleeping

Utt Num	Utterance	Subject+ Verb?	Indefinite Pronouns	Personal Pronouns	Main Verbs	Secondary Verbs	Negatives	Conjunc.	Interrog. Reversals	Wh-Questions	Sentence Point
5	C THIS BOY GET/3S DRESSED FOR DINNER.	1	1		2						1
8	C HE/*'S LOOK/ING IN THE MIRROR.	1		2	0						0
9	C DO/ING HIS TIE.	0									
10	C (UM) HIS DOG/'S SIT/ING ON THE CHAIR.	1		2	1						1
11	C TURTLE IS SIT/ING ON THE FLOOR.	1			1						1
12	C (UM) FROG/'S ON THE FLOOR.	1			1						1
13	C THE SHOE/S IS[EW:ARE] RIGHT THERE.	1			0						0
14	C HE/'S GET/ING READY FOR DINNER.	1		2	1						1
15	C *HE/'S GO/ING OUT TO DINNER.	0									
17	C (UM) THE BOY/'S PET/ING HIS DOG.	1		2	1						1
18	C THE TURTLE CRAWL/3S IN HIS SHELL.	1		2	2						1
19	C AND FROG JUMP/3S RIGHT INTO HIS POCKET.	1		2	2						1
20	C AND HE WAVE/3S GOODBYE.	1		2	2						1
24	C I SEE A MAN (THAT/'S HA*)>	1		1	1						1
25	C HE/'S HAPPY.	1		2	1						1
26	C AND THE MOTHER/'S LIKE THIS.	1	1		1						1
27	C AND THE TWO KID/S ARE LOOK/ING UP.	1			2						1
28	C AND HE/'S STAND/ING.	1		2	1						1
31	C (HE) THE FROG (JUMP) JUMP/3S RIGHT INTO THE SAXOPHONE WHEN THEY ORDER.	1		3	2			8			1
					1			Overall DSS = 4.11			
33	C THE MAN TOOT/3S HIS (UM) SAXOPHONE.	1		2	2						1
			1	2	1.26			8			88.89

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3	▪ no, some, more, all, lot(s), one(s), two (etc.), other(s), another ▪ something, somebody, someone	▪ plurals: we, us, our(s), they, them their, these, those	
4	▪ nothing, nobody, none, no one		▪ can, will, may + verb: may go ▪ obligatory do + verb: don't go ▪ emphatic do + verb: I do see.
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7	▪ any, anything, anybody, anyone ▪ every, everything, everybody, everyone ▪ both, few, many, each, several, most, least, much, next, first, last, second (etc.)	▪ (his) own, one, oneself, whichever, whoever, whatever: Take whatever you like.	▪ passive with get, any tense ▪ passive with be, any tense ▪ must, shall + verb: must come ▪ have + verb + en: I've eaten. ▪ have got: I've got it.
8			▪ have been + verb + ing ▪ had been + verb +ing ▪ modal + have + verb + en: may have eaten ▪ modal + be + verb + ing: could be playing ▪ other auxiliary combinations: should have been sleeping

Possible Grammatical Goal

- Child will produce auxiliary modals (can, will) + verb with 80% accuracy in a 100-utterance narrative sample.

Other Things to Consider…

- Absent and/or emerging (but not mastered!) targets
- Phonetic composition of the targets
- Developmental appropriateness of the targets
- Functionality of the targets
- Caregivers' preferences
- Generalizability
- Addressing 2-3 form at a time

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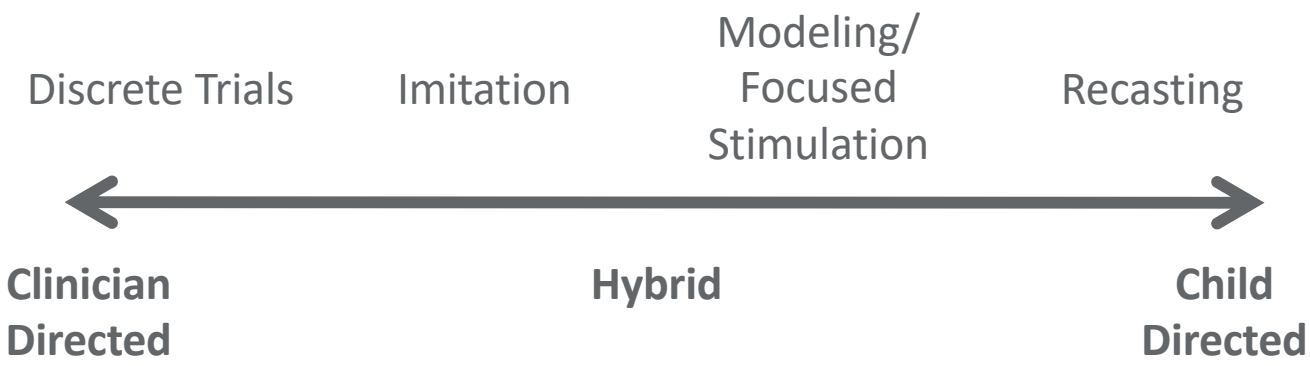
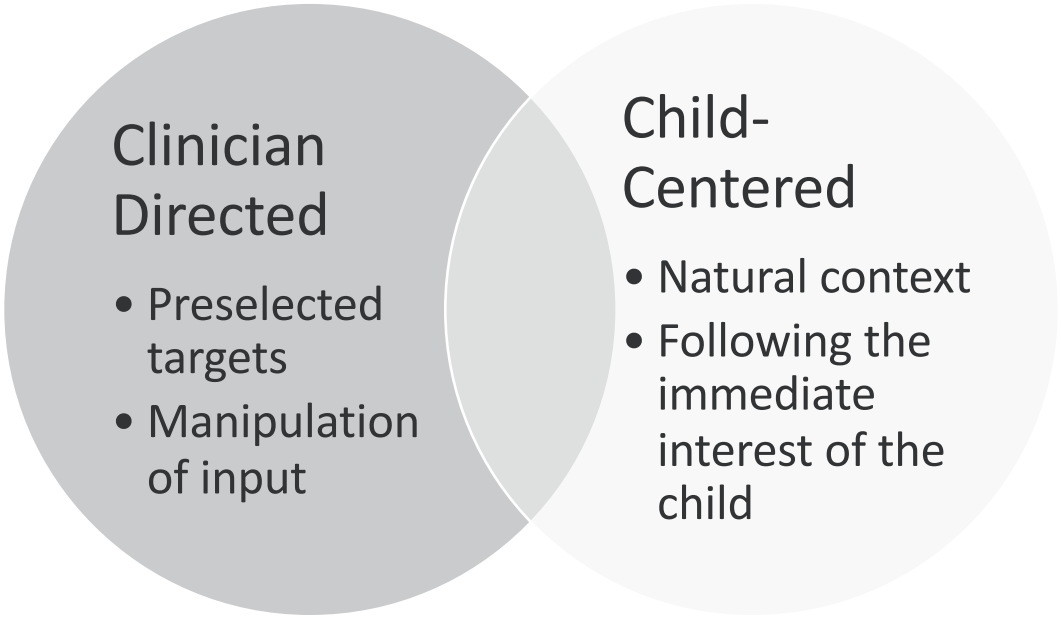
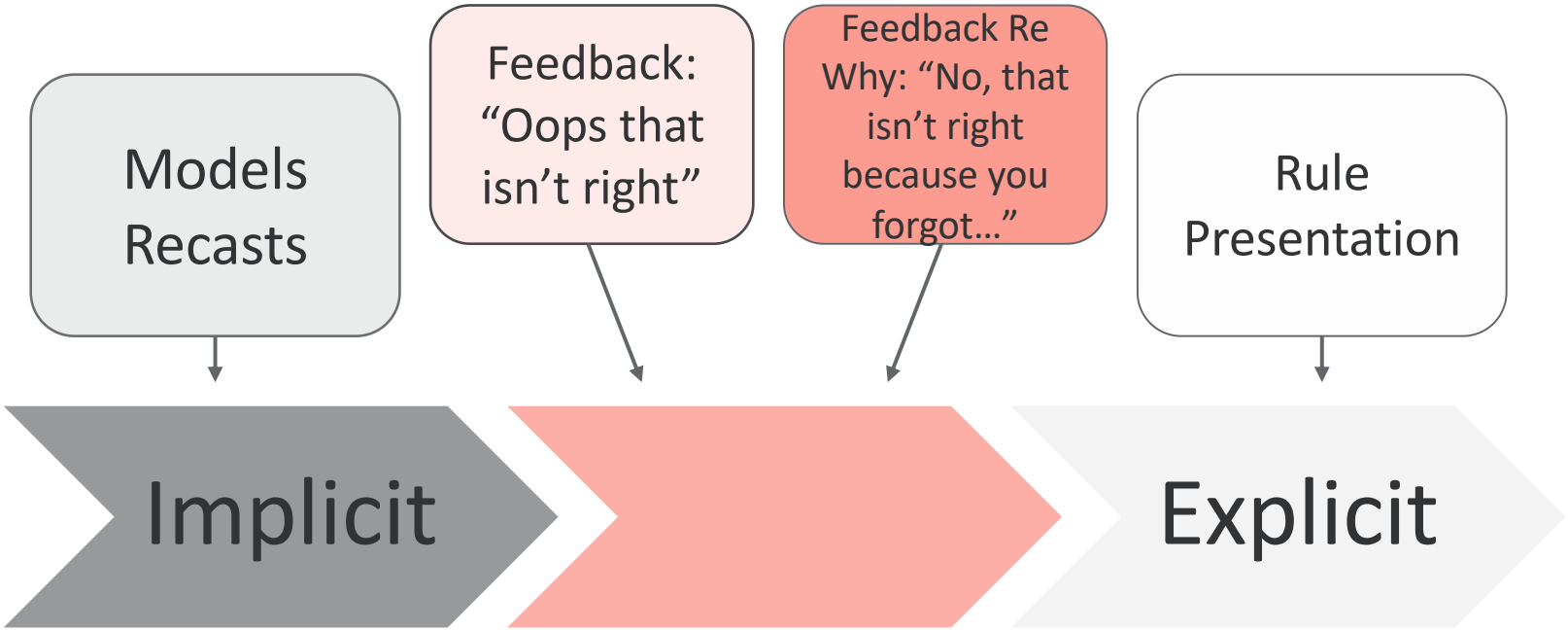
Intervention Approaches

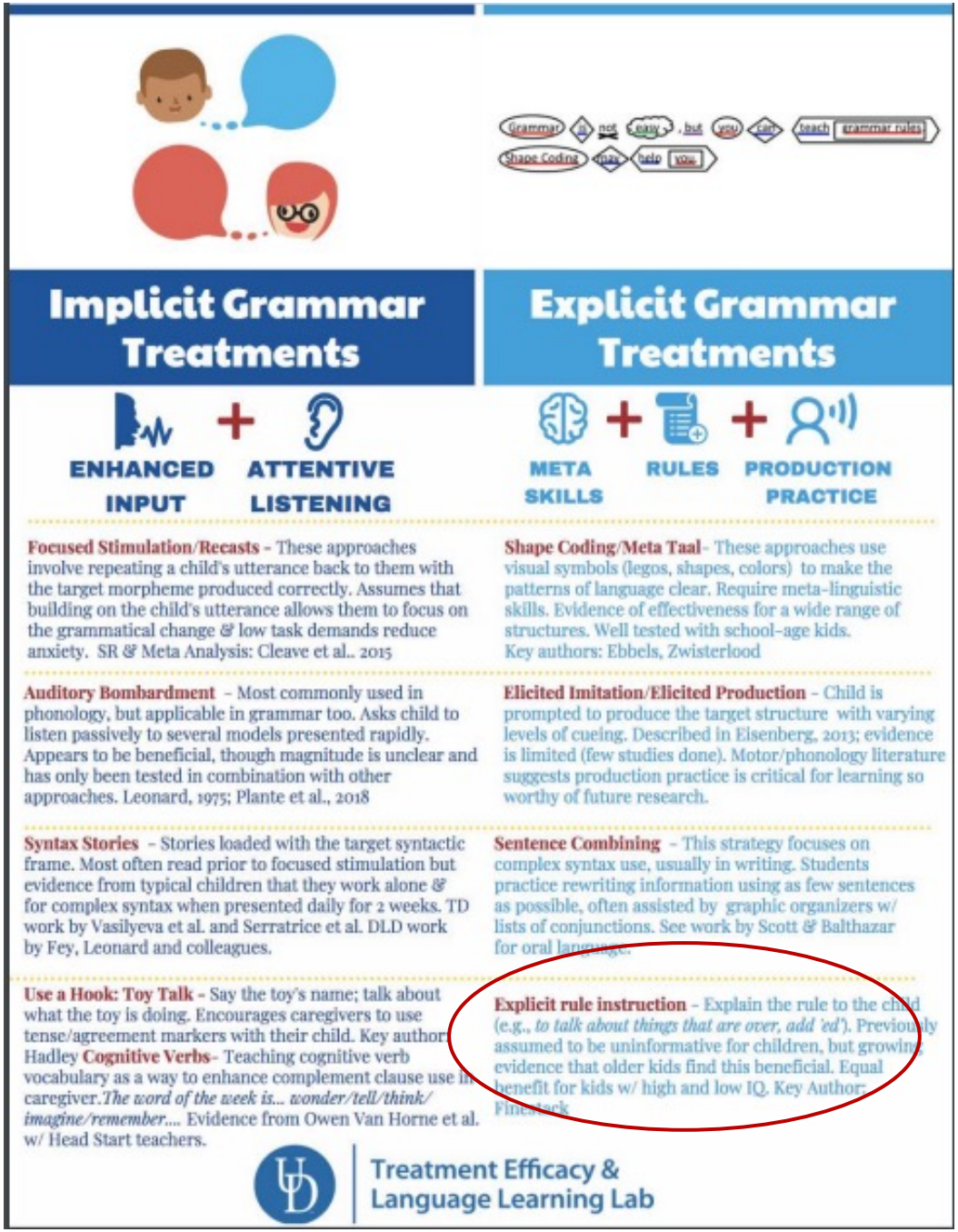


Hybrid Approach



Continuum of Explicitness…





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Today's Agenda

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- Evidence-based Approaches
- Monitoring Progress

5 Evidence-based Approaches

1. Auditory Bombardment

2. Verb Variability

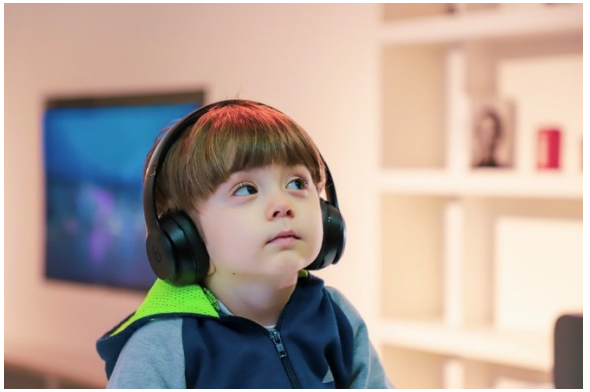
3. Verb Complexity

4. Verb Placement

5. Explicit Approaches

1. Auditory Bombardment

- What is it?
  - A brief period of high-density modeling (2-4 min)
  - Clinician prompts child to listen carefully
  - No other demands are placed on the child
- When should you do it?
  - ~~Before treatment session~~
  - After treatment session



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What does the research say?

(https://pubs.asha.org/doi/pdf/10.1044/2017_LSHSS-17-0077)

LSHSS

Research Article

Effective Use of Auditory Bombardment as a Therapy Adjunct for Children With Developmental Language Disorders

Elena Plante,[a] Alexander Tucci,[a] Katrina Nicholas,[a]
Genesis D. Arizmendi,[a] and Rebecca Vance[a]

Purpose: Modeling of grammatical forms has been used in conjunction with conversational recast treatment in various forms. This study tests the relative effect of providing bombardment prior to or after recast treatment.
Method: Twenty-eight children with developmental language disorder participated in daily conversational recast treatment for morpheme errors. This treatment was either preceded or received auditory bombardment before or after enhanced conversational recast treatment. However, there was a difference in the number of children who could be considered treatment responders versus nonresponders, favoring those who received auditory bombardment after recast treatment.

What does the research say?

- Plante et al. (2018)
  - 28 preschool children aged 4;3-6;2 with DLD
  - Half in Bombardment First and half in Bombardment Last
  - Auditory bombardment consisted of 24 short clinician utterances
    - Joe tripped.
    - The boys raced.
    - She scared him.

What does the research say?

- Plante et al. (2018)
  - Pairing auditory bombardment with conversational recast produced significant effects for children with DLD
  - No significant differences between Bombardment First and Bombardment Last
  - More children in Bombardment Last than in Bombardment First (12 vs. 8) showed a minimum treatment response

Clinical Considerations

- Auditory bombardment may be presented in a variety of short activities as long as they hold the child's attention (= looking at the clinician)
- Keep the overall duration as brief as possible
- Easy to execute and incorporate into therapy

5 Evidence-based Approaches

1. Auditory Bombardment

2. Verb Variability

3. Verb Complexity

4. Verb Placement

5. Explicit Approaches

2. Verb Variability

- What is it?
  - High verb variability facilitates grammatical morpheme learning
- How many is enough?
  - [redacted] different verbs in each session

What does the research say?

https://pubs.asha.org/doi/pdf/10.1044/2014_AJSLP-13-0038

AJSLP

Research Article

Variability in the Language Input to Children Enhances Learning in a Treatment Context

Elena Plante,[a] Trianna Ogilvie,[a] Rebecca Vance,[a] Jessica M. Aguilar,[a] Natalie S. Dailey,[a] Christina Meyers,[a] Anne Marie Lieser,[a] and Rebecca Burton[a]

Purpose: Artificial language learning studies have demonstrated that learners exposed to many different nonword combinations representing a grammatical form demonstrate rapid learning of that form without explicit instruction. However, learners presented with few exemplars, even when they are repeated frequently, fail to learn the underlying grammar. This study translated this experimental generalization probes as well as spontaneous use of trained morphemes was tracked throughout treatment. **Results:** The high-variability condition only produced significant change in children's use of trained morphemes, but not untrained morphemes. Data from individual children confirmed that more children in the high- than the low-variability condition showed a strong treatment

What does the research say?

- Plante et al. (2014)
  - 18 preschool children aged 4;0-5;11 with DLD
  - 12 vs. 24 unique verbs during recasts for 6 weeks
  - More children in the high- than the low-variability condition showed a strong treatment effect
  - The high-variability condition produced significant change in children's use of targeted morphemes

Clinical Considerations

- Mix and match your verb cards
  - Shuffle the cards into sets of 8 or 12
  - Select 2 or 3 sets for each session

https://unsplash.com/photos/9SewS6lowEU

5 Evidence-based Approaches

1. Auditory Bombardment

2. Verb Variability

3. Verb Complexity

4. Verb Placement

5. Explicit Approaches

3. Verb Complexity

- What is it?
  - Clinicians often take a developmental approach when teaching grammar, starting with easier (early acquired) targets.
  - **But**, children may benefit from models and recasts that include “hard” verbs over “easy” verbs first.

CONTINUED

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What does the research say?

https://pubs.asha.org/doi/full/10.1044/2017_JSLHR-L-17-0001

JSLHR

Research Article

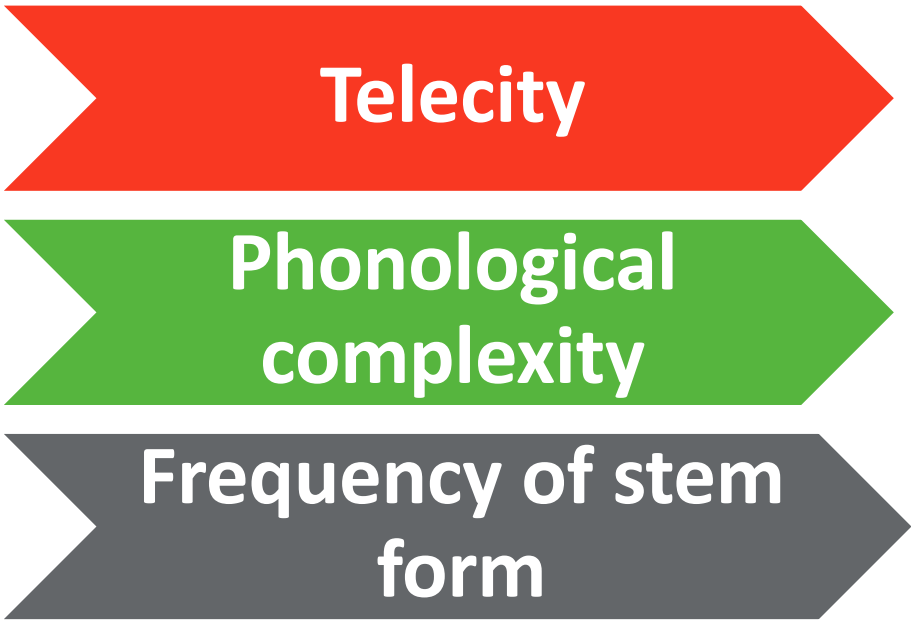
Do the Hard Things First: A Randomized Controlled Trial Testing the Effects of Exemplar Selection on Generalization Following Therapy for Grammatical Morphology

Amanda Jean Owen Van Horne,[a] Marc Fey,[b] and Maura Curran[a]

What does the research say?

- Randomized control trial
- 18 children with DLD between 4-10 years
- Target was increasing use of regular past-tense -*ed*
- Treatment groups: Easy First (*n* = 10); Hard First (*n* = 8)
- Hard-first group made greater gains in accuracy

What makes verbs easy or hard?



Telecity

Telic	Directed toward a definite end (easier)	jump trip spill
Atelic	Shows that an action is incomplete (harder)	walk run cry

Phonological complexity

Number of sounds in a cluster	/mpt/ in *jumped* vs. /nd/ in *stunned*
Unusual phonological combination	Stems that end with *-t* and *-d* and then add *-ed* are more difficult
Manner and place of sound production	Obstruent and alveolars more difficult

Frequency

- Verbs heard frequently without being inflected are harder to inflect

  Fish ➡ Fishing

- Verbs that are rarely inflected with past tense harder to inflect with past tense

  I want ice cream.

CONTINUED

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Easy to Hard

1. Close
2. Play
3. Scare
4. Answer
5. Jump
6. Carry
7. Cry
8. Slip
9. Trip
10. Walk
11. Remember
12. Kiss
13. Climb
14. Discover
15. Help
16. Yell
17. Crawl
18. Stamp
19. Sneeze
20. Cough
21. Stretch
22. Guess
23. Work
24. Color
25. Point
26. Turn
27. Bake
28. Roll
29. Hop
30. Smile
31. Whistle
32. Clean
33. Count
34. Stir
35. Paint
36. Wave
37. Plant
38. Believe
39. Bark
40. Wiggle
41. Clap
42. Squish
43. Bounce
44. Yawn
45. Snore
46. Whisper
47. Scratch
48. Dance
49. Float
50. Growl
51. Listen
52. Sail
53. Hum
54. Paddle
55. Rake
56. Giggle
57. Fish
58. Imagine
59. Rest
60. Exercise

Clinical Consideration

- Model target grammatical forms on “hard” verbs first.

Do the hard stuff first!

CONTINUED

American Board of Child Language & Language Disorders

Easy to Hard

1. Close
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56. Giggle
57. Fish
58. Imagine
59. Rest
60. Exercise

5 Evidence-based Approaches

1. Auditory Bombardment

2. Verb Variability

3. Verb Complexity

4. Verb Placement

5. Explicit Approaches

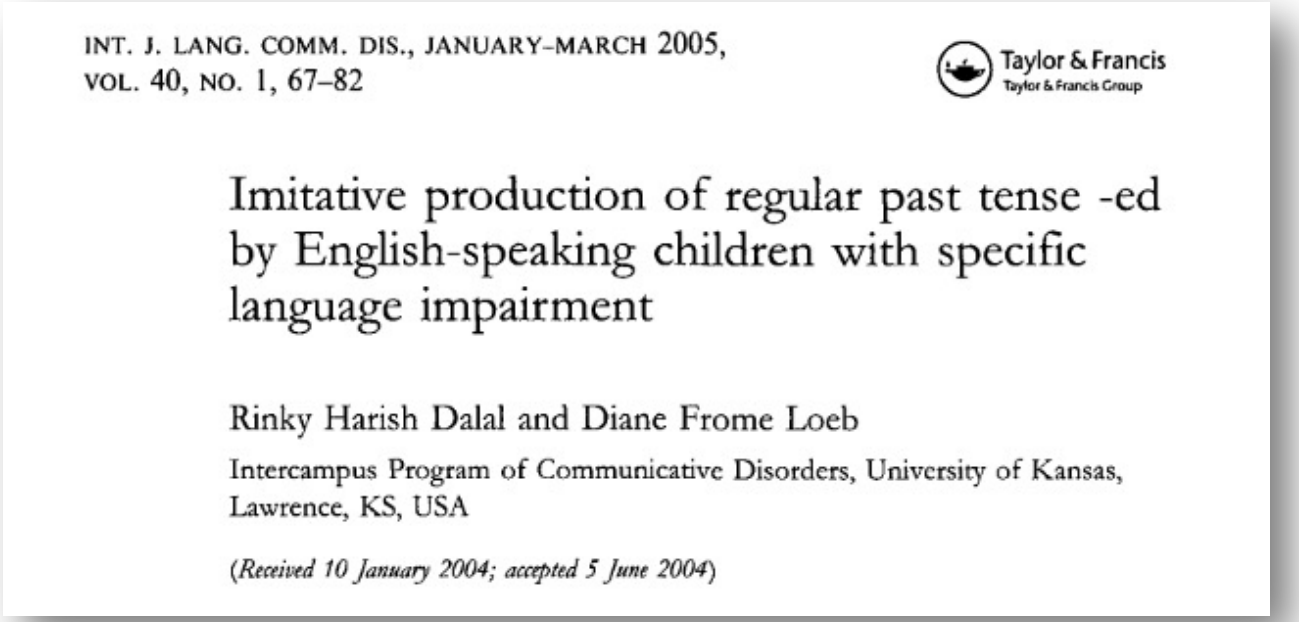
4. Verb Placement

- What is it?
  - Clinician ensures that the child experiences the target form on verbs that vary in sentence placement

The loud boy **shouted**.

He **shouted** for his mom.

What does the research say?



INT. J. LANG. COMM. DIS., JANUARY–MARCH 2005,
VOL. 40, NO. 1, 67–82

Taylor & Francis
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Imitative production of regular past tense -ed by English-speaking children with specific language impairment

Rinky Harish Dalal and Diane Frome Loeb

Intercampus Program of Communicative Disorders, University of Kansas, Lawrence, KS, USA

(*Received 10 January 2004; accepted 5 June 2004*)

What does the research say?

- 10 children with DLD aged 4-6 years
- Completed sentence imitation task with verbs marked with past tense-ed in sentence internal and final positions
- Omission errors only occurred in sentence internal position

Clinical Consideration

- Vary the verb placement by using different syntactic platforms:
  - He X-ed.
  - He X-ed with the Y.
  - Did you see when they X-ed?

5 Evidence-based Approaches

1. Auditory Bombardment

2. Verb Variability

3. Verb Complexity

4. Verb Placement

5. Explicit Approaches

5. Explicit Approaches

- Draw the learner's attention and consciousness to language use and the rules and patterns guiding language forms.

"When you talk about something that already happened, you added a /t/ sound or a /d/ sound to the end of the action word."

Continuum of Explicitness…

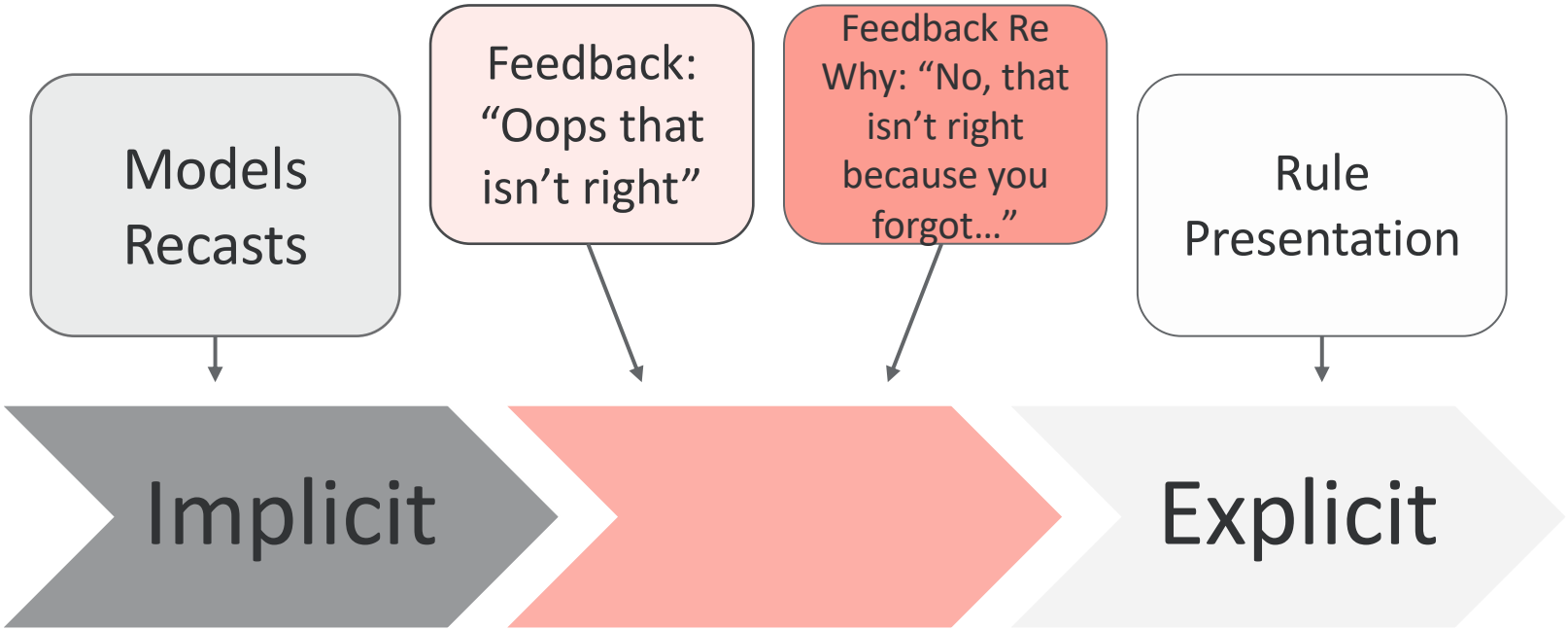


Table 5. Frequency ratings of intervention procedures, activities, and agents.

	Early education (*n* = 114)			Elementary (*n* = 224)		
Intervention component	**Never**	**Sometimes**	**Frequently**	**Never**	**Sometimes**	**Frequently**
Procedures						
Models	0%	2%	98%	0%	9%	90%
Recasts	2%	21%	74%	3%	27%	65%
Requests for imitation	0%	25%	73%	2%	34%	61%
Explicit presentations	4%	31%	64%	1%	27%	69%
Other	< 1%	< 1%	6%	< 1%	2%	5%

Finestack & Satterlund, 2018

What does the research say?

Finestack & Fey, 2009

32 6-9 year-olds with DLD; 5 sessions; 1 novel form

Implicit: 19% “Pattern-users”, Explicit: 63% “Pattern-Users”

Finestack, 2018

25 5-8 year-olds with DLD; 5 sessions per form; 3 novel forms

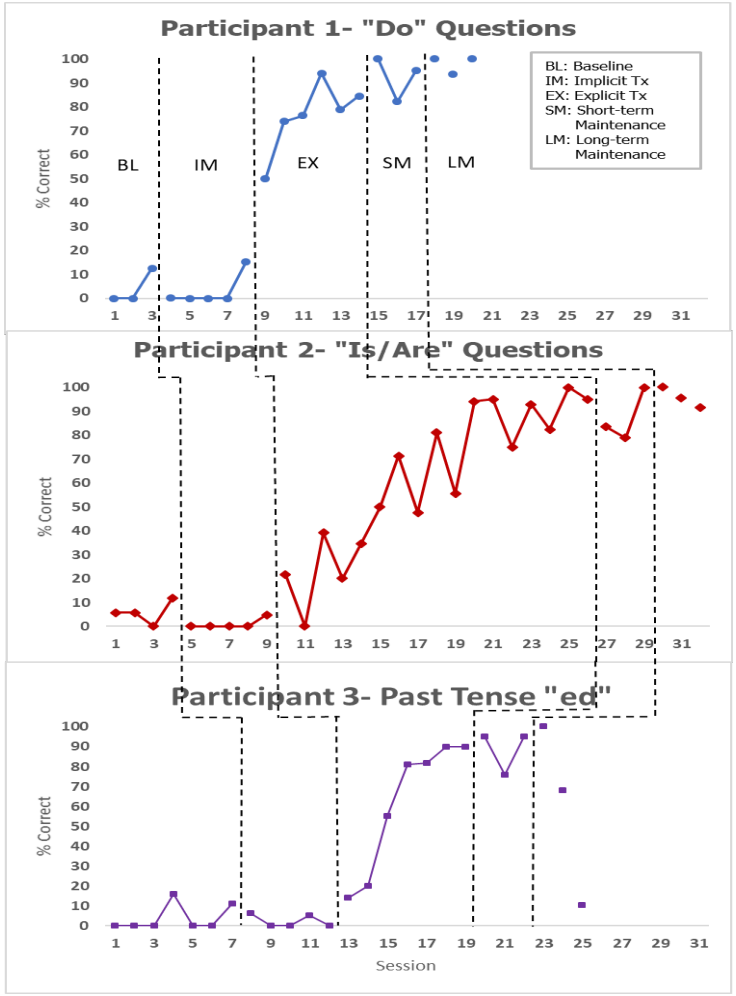
Implicit: 23% “Pattern-users”, Explicit: 83% “Pattern-Users”

Finestack, Engman, Huang, Bangert, & Bader, 2019

3 5-9 year-olds with ASD; 6-17 20-min sessions; 1 true form

All participants learned target form

Figure 1. Results of Multiple-Baseline Study Targeting True Grammatical Forms



Finestack, L., Engman, J., Huang, T., Bangert, K. J., & Bader, K. (2019). Evaluation of a Combined Explicit–Implicit Approach to Teach Grammatical Forms to Children With Grammatical Weaknesses. *American Journal of Speech-language Pathology*, 1-17.

Example of Explicit Presentation

Explicit Presentations

Target	Sample Presentation Platforms	Example Explicit Presentation
3rd Person -s	The kangaroo hops. The kangaroos hop. The toy works with batteries. The new toys work with batteries.	When you talk about what one person or thing does, you add an /s/ sound to the end of the action word. Listen, 'He walks to the store,' When you talk about what more than one person or thing does, you don't add anything to the end of the action word. Listen, 'They walk to the store,'
Past Tense -ed	The cat stretched. The cat will stretch. He baked a pie. He will bake a pie	When you talk about something that already happened, you added a /t/ sound or a /d/ sound to the end of the action word. Listen, 'He jumped,' 'They paddled.'
Aux is/are Statements	The dogs are growling. The dog is growling. They are turning the crank. He is turning the crank.	When you talk about what one person or thing is doing you use 'is' and add /ng/ to the action word. Listen, 'She is walking.' When you talk about what more than one person or thing is doing, you use 'are' and add /ng/ to the action word. Listen, 'They are walking to the store,'
Aux do/does Questions	Does he exercise? Do they exercise? Does he rake the leaves? Do they rake the leaves?	When you ask a question about one person or thing, begin with 'does.' Listen, 'Does he want more?' When you ask about more than one person or thing begin with 'do.' Listen, 'Do they want more?'

Clinical Consideration

- Add explicit rule presentations to other intervention approaches

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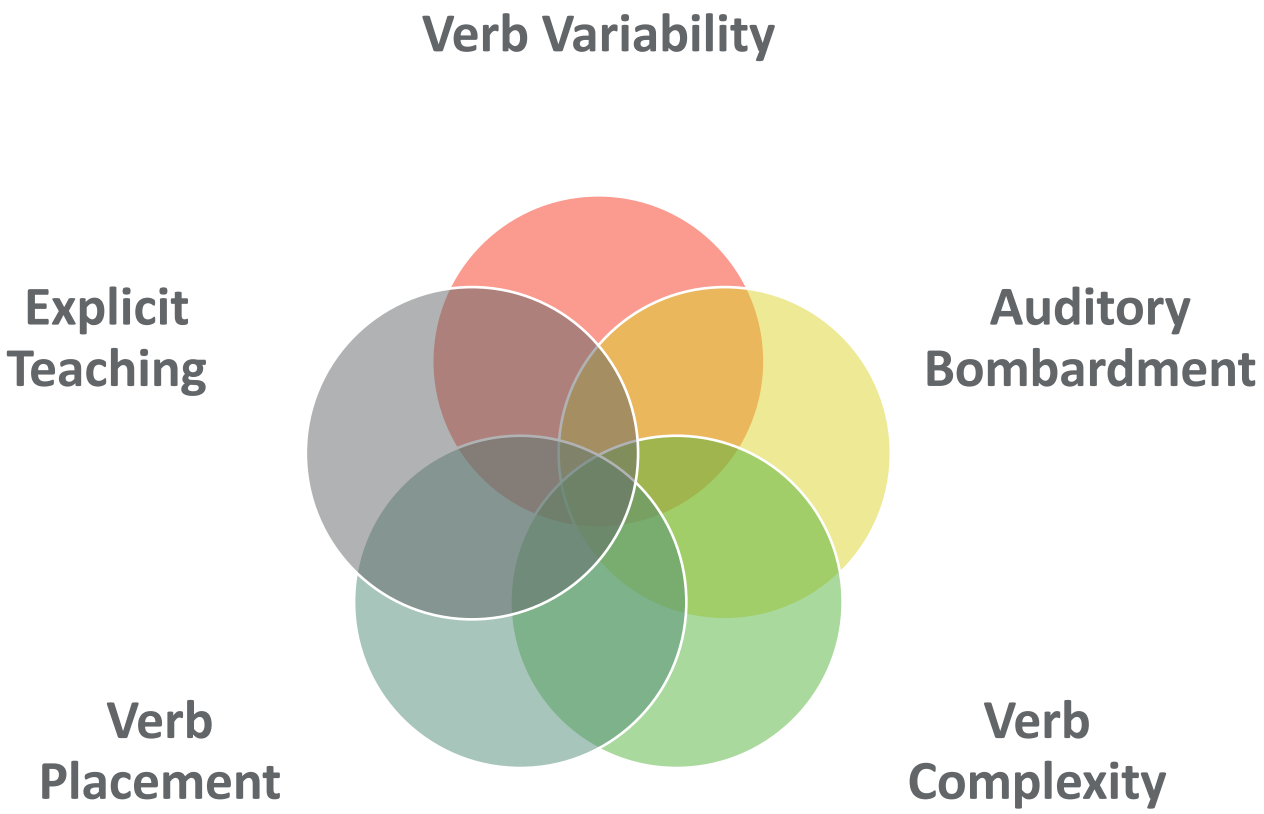
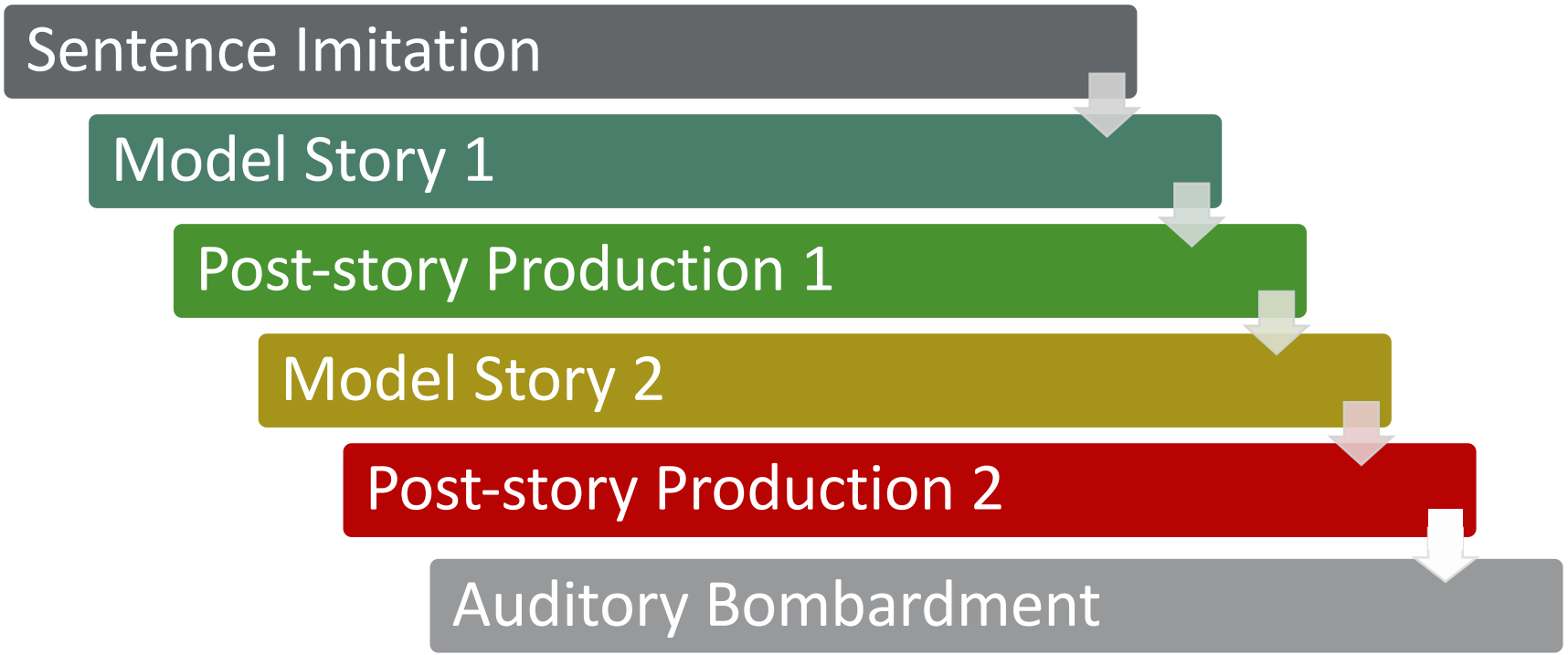
Put it all together!



Each 30-min session



Sentence Imitation: 5 min

Utilizing verb variability, complexity, placement and explicit teaching techniques!

- Drill activity
- Participants imitate 7 contrastive sentence pairs
- Pairs will vary in the syntactic platform so target is in medial or final position

Example Sentence Imitation Items

Target	Sample Presentation Platforms
3rd Person -s	The kangaroo hops./The kangaroos hop. The toy works with batteries./The new toys work with batteries.
Past Tense -ed	The cat stretched./The cat will stretch. He baked a pie./He will bake a pie
Aux is/are Statements	The dogs are growling./The dog is growling. They are turning the crank./He is turning the crank.
Aux do/does Questions	Does he exercise?/Do they exercise? Does he rake the leaves?/Do they rake the leaves?

Sentence Imitation Feedback

- **Child Correct:** Clinician provides positive feedback and hear the sentence again (e.g., “That was right. The kangaroo hops”).

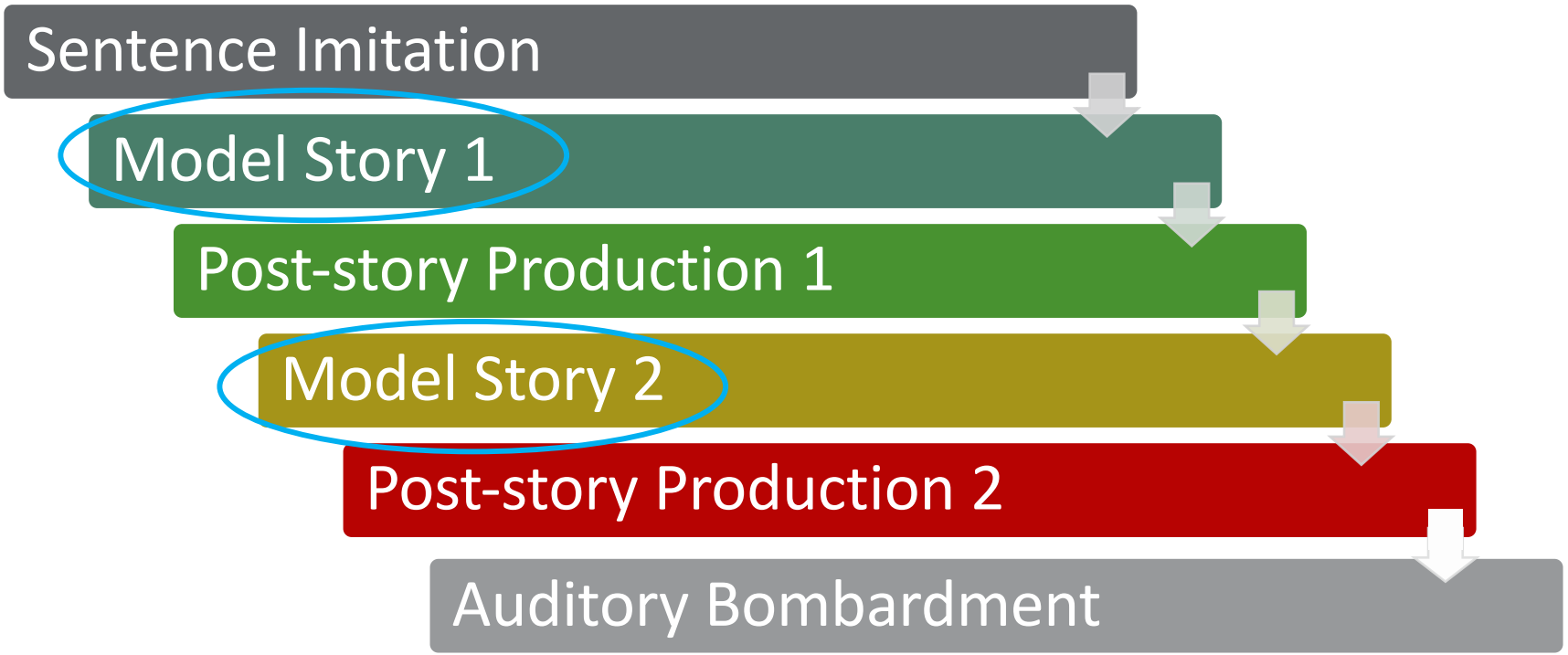
- **Child Not Correct:** Clinician provides corrective feedback, repeats the sentence, and asks the participant to try again (e.g., “That wasn’t what I said. Listen. The kangaroo hops. Try it again.”).

Sentence Imitation Feedback

- Clinician also provides the child with the rule (e.g., "That was right. When you talk about what one animal does, you add an /s/ sound to the end of the action word. Listen, 'The kangaroo hops.").

- **Dosage:** 7 unique verbs; at least 28 models or recasts of target; 14 rule presentations.

Each 30-min session



Model Story: 4 min

- Clinician models target forms using a naturalistic story-sharing focused stimulation approach.
- Each short story contains at least 5 unique verbs following the Owen Van Horne “Hard to Easy” verbs assigned to the session.

Model Story: 4 min

- Clinician uses toys to model elements of the story and to help maintain the participant's attention during the story presentation.
- Only demand placed on the child is to pay attention to the story as best as possible.

➢ **Dosage/story:** 5 unique verbs; at least 5 models of target

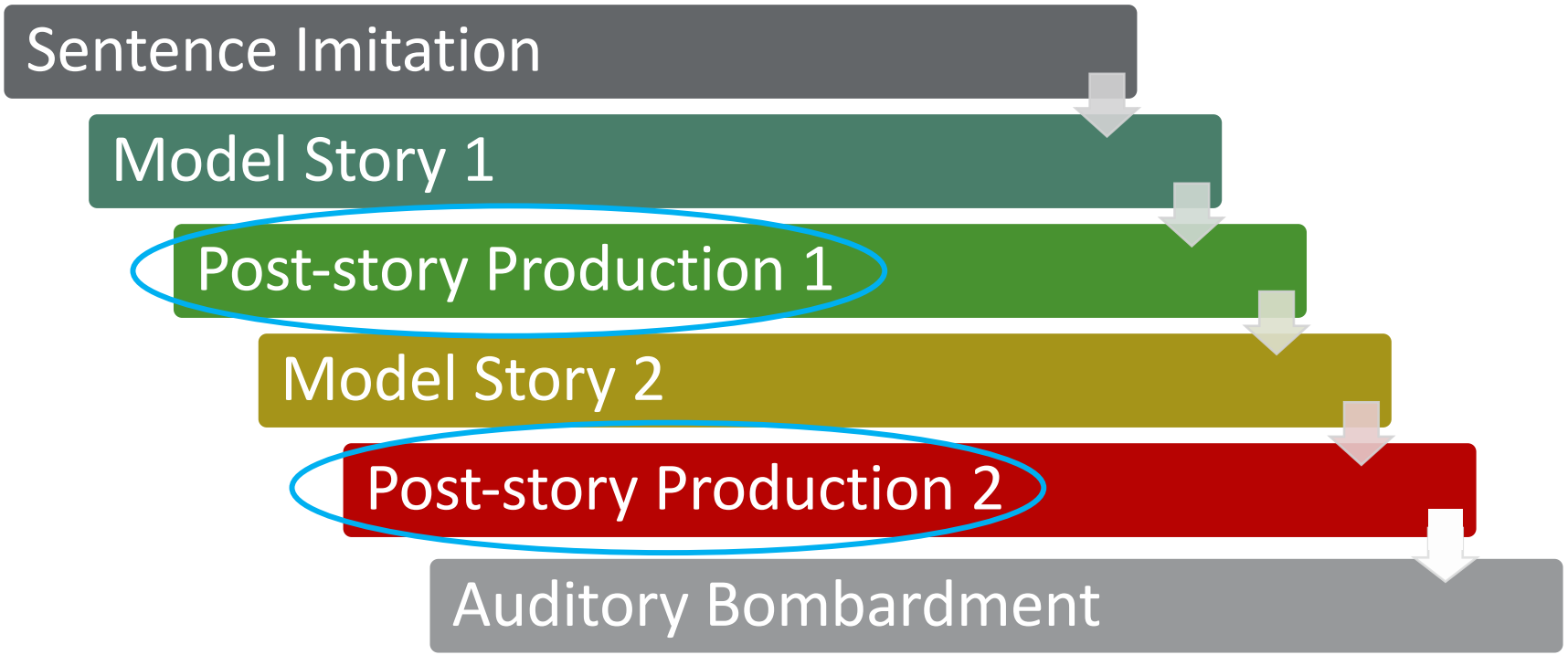
Sample Story

Swimming

- **Target form:** regular past tense “ed”
- **Theme:** Swimming
- **Verbs: talk, answer, live, agree, walk, beg, kiss, climb, watch, loved, change, smile**

- Susie always talked about going swimming.
- One morning the phone was ringing so Susie answered the phone.
- Her friend Sarah that lived down the street was calling to see if Susie was available to go to the pool.
- She happily agreed and went to find her swimming suit.
- After she put her swimming suit on, she walked into the kitchen to say goodbye to her mom.
- Her mom was not happy that Susie didn’t ask for permission to go to the pool.
- Susie begged her Mom until she finally said yes.
- Susie kissed her Mom goodbye and made her way to the pool.
- At the pool, Susie and Sarah climbed up the ladder so that they could go down the slide.
- The lifeguard at the pool watched the girls carefully to make sure they were safe.
- Susie loved splashing around in the water.
- The girls left the pool when the weather changed and the sun went down.
- When Susie got home she smiled thinking about going to the pool again tomorrow.

Each 30-min session



Post-story Production: 5-7 min

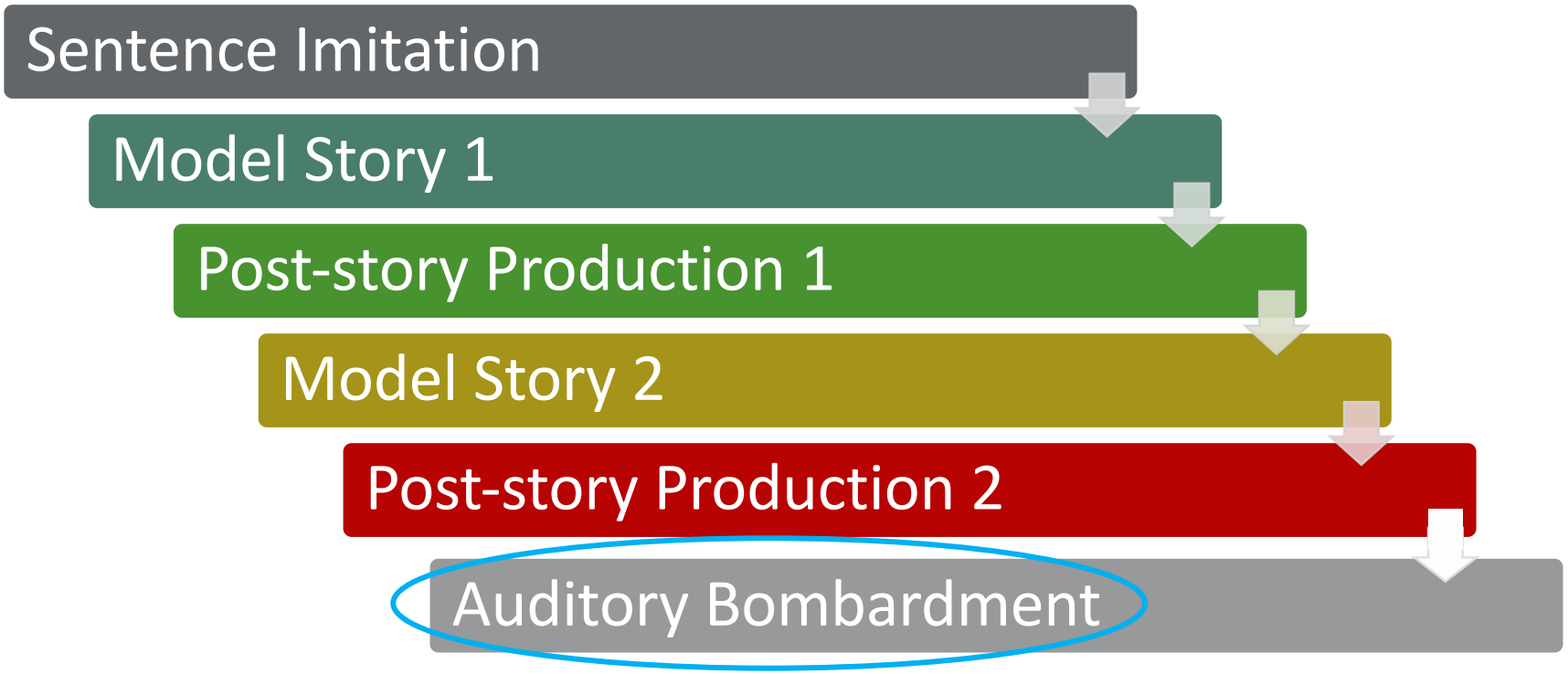
- Clinician creates at least five opportunities for child to produce the target form using a play format.
- Prompt child to attempt to produce the target form using one of the "Easy/Hard" verbs:
  - Directly related to the story (e.g., "What does the kangaroo do to get attention?")
  - Related to the play toys (e.g., "Look at the kangaroo. What does he do?")
  - Related to another area of interest directed by the child.

Post-story Production Feedback

- Clinician provides a recast after each target production or attempt.
- Clinician also provides the child with the rule (e.g., “That was right. When you talk about what one animal does, you add an /s/ sound to the end of the action word. Listen, ‘The boy works.’”).

➢ **Dosage:** at least 10 models or recasts of target; 5 rule presentations

Each 30-min session



Auditory Bombardment: 3 min

- Clinician present child with sentence pairs containing the target and a contrast (similar to those in Sentence Imitation activity).
- Child prompted to listen carefully; no other demands will be placed on the child.

Auditory Bombardment: 3 min

- Clinician also presents the guiding rule at the beginning of the activity and after the second and fifth sentence set.

➢ **Dosage:** 7 unique verbs; at least 14 models of target or contrast; 3 rule presentations

Dosage per Session

- 24 unique verbs
- At least 72 models or recasts per session
- 27 rule presentations

- **Note:** Can fade the rule prompts across sessions as child gains gains mastery.

Today's Agenda

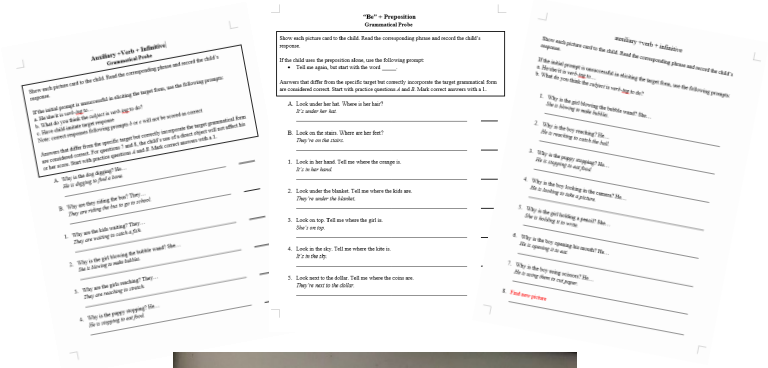
- Introduction
- Why Grammar
- Explicit vs. Implicit
- Evidence-based Approaches
- Monitoring Progress

Monitoring Progress

- Clinician-created Probes
  - Picture Descriptions
  - Cloze Tasks
- Language samples!
  - Conversation
  - Narrative

Available Probes

- Reflexive pronoun
- Past tense copula
- Relative clause
- Passive
- Negative wh-question
- Propositional clause
- 3s+infinitive
- Auxiliary+verb+infinitive



http://www.finestackclil.com/presentations/

Reflexive Pronoun Probes

- Potential targets: himself, herself, themselves
- Standard and additional prompts
  - "The boy looks in the mirror. Who does he see?"
  - "Start with He…"
- Structure analysis: Subject + Verb + target
- Think of 10-12 verbs/actions that are appropriate in this context!

Today's Agenda

- Introduction
- Why Grammar
- Explicit vs. Implicit
- Evidence-based Approaches
- Monitoring Progress

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