



Effective Literacy Instruction for Deaf & Hard of Hearing Students

Understanding the research base for
advocacy & implementation

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UConn

Good afternoon!

Existing research on education for DHH students

Findings from recent research

Implications of recent research

Related Materials



<https://goo.gl/j8oat7>

Your Experiences

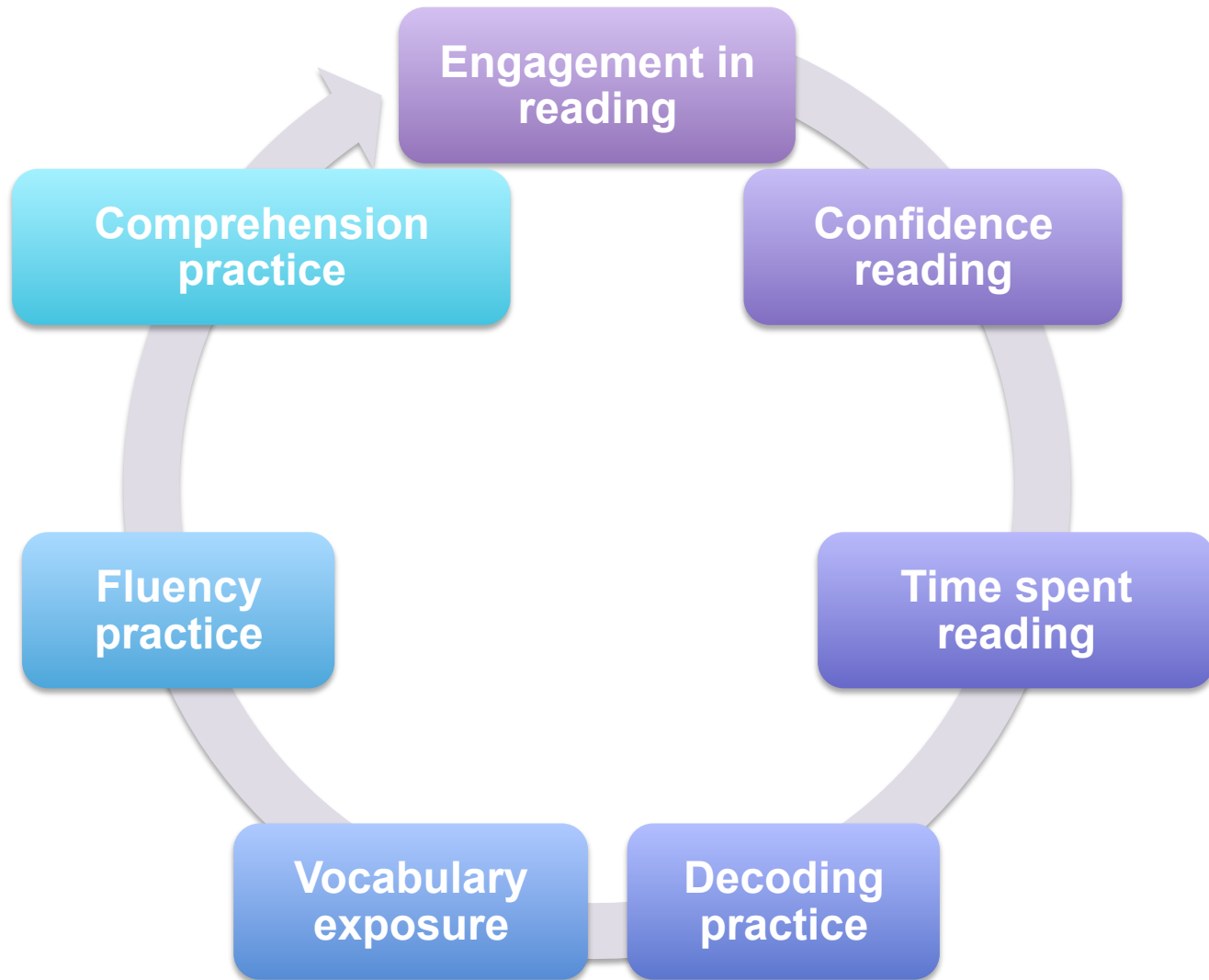
1. When and how have your children developed language and/or literacy?
2. What are their successes? Challenges?
3. Which professionals work with your child?
4. What do you wonder about related to your child's language and literacy experiences?

Literacy Non-Negotiables

Every child...

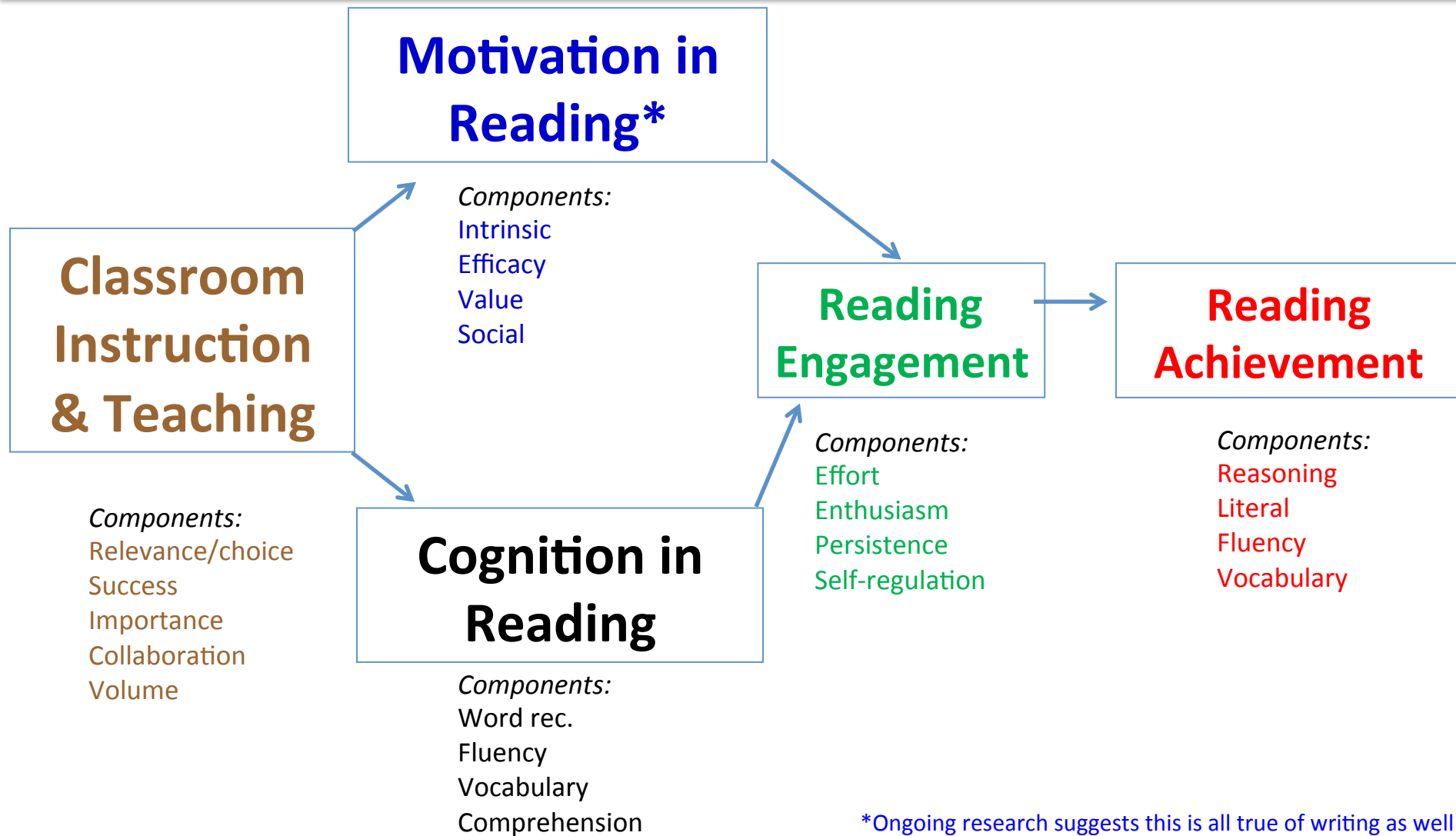
1. reads something he or she chooses
2. reads accurately with understanding
3. writes about something meaningful
4. talks with peers about reading and writing
5. has access to an expert reader/writer's thinking

Cycles of Reading Success



The Engagement Model of Reading Development

Guthrie, 2014



The Traditional Narrative about DHH Students

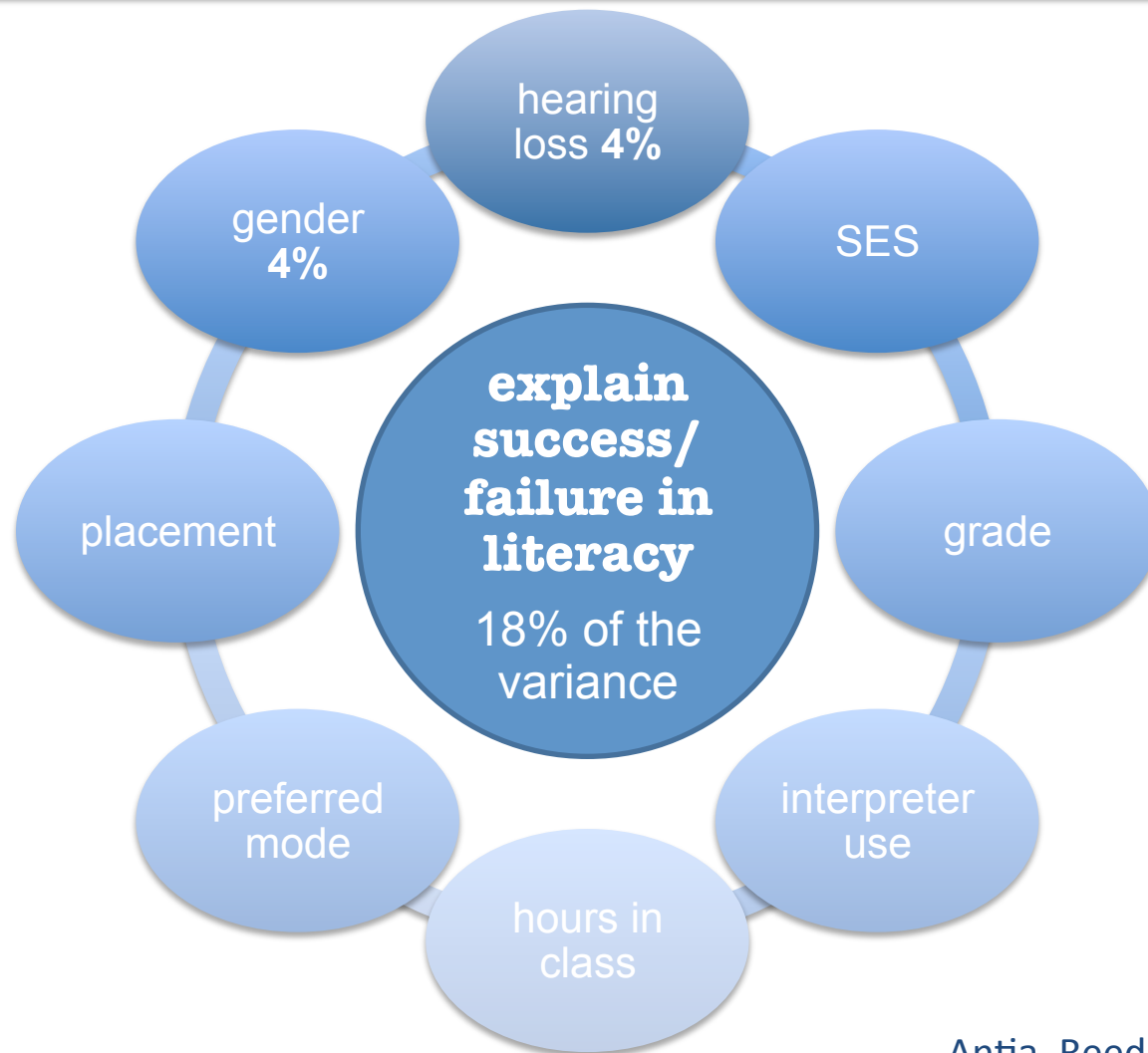
The median reading comp. test score for 17-18 year old d/hh students corresponds to a **4th grade level** (Gallaudet Research Institute, 2003)

Between the ages of 12-22 d/hh students make **~1 year of gains** in literacy (Yoshinaga-Itano, Snyder & Mayberry, 1996)

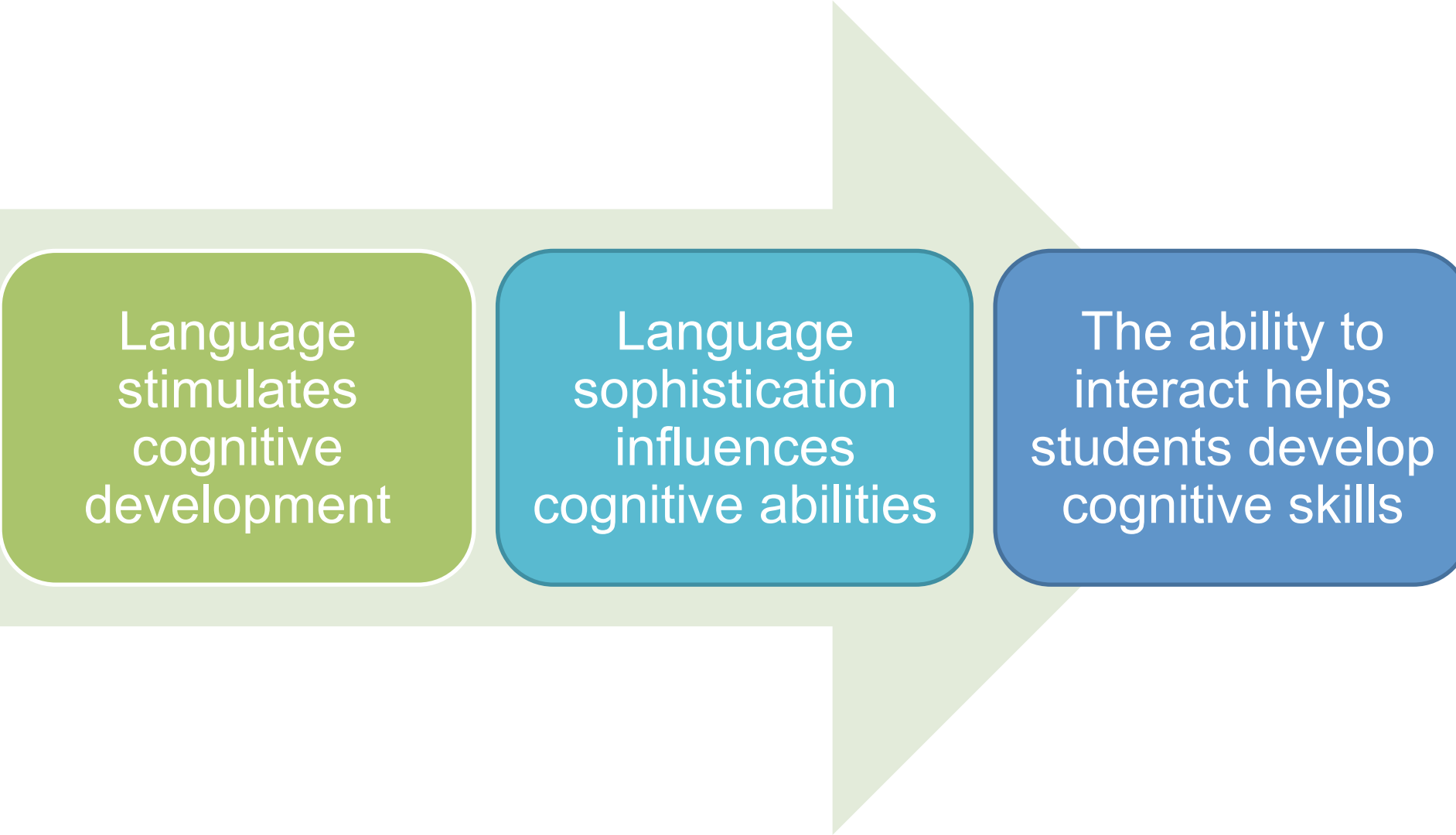
D/hh adolescence experience a writing **“plateau”** in semantics & syntax (Musselman & Szanto, 1998)

Between the ages of 12-22 d/hh students make **~1 year of gains** in reading comp. & vocab. development (Yoshinaga-Itano, Snyder & Mayberry, 1996)

Expanding the Traditional Narrative



Importance of Language



Language
stimulates
cognitive
development

Language
sophistication
influences
cognitive abilities

The ability to
interact helps
students develop
cognitive skills

Language Diversity of DHH Students

Language History #1	full access to ASL	fully developed ASL as L1	no delay in language acquisition	develop (traditional) literacy in L2
Language History #2	sufficient access to spoken English	fully developed English as L1	no delay in language acquisition	develop literacy in L1
Language History #3	lack of accessible language models (Mitchell & Karchmer, 2004, Hoffmeister, 2013)	often do not acquire a fully developed L1	significant language delays in L1	may struggle with literacy development



Impact of Language Diversity

Developed Metalinguistic Awareness

"I was really close to my father until I was 5 years old. My father died in a wreck. He was driving with no seatbelt, and he rolled his car 4 times and he jumped out..."

Language Transfer

*"Sometime that problem solve it."
"Night yesterday buy movie DVD."*

ESKILL little

Old man slow walk

Confused Compositions

*"I want be need do know."
"I say what your name."*

*I go I want Pally oh
Well*

*I happy I went shop for
Sports banqueto*

Research

“...40 years of peer-reviewed journal articles... A total of 964 articles related to literacy and deafness... Limited data to establish evidenced-based practices...”

-- Luckner, Sebald, Cooney, Young & Muir, 2005

Recent Research

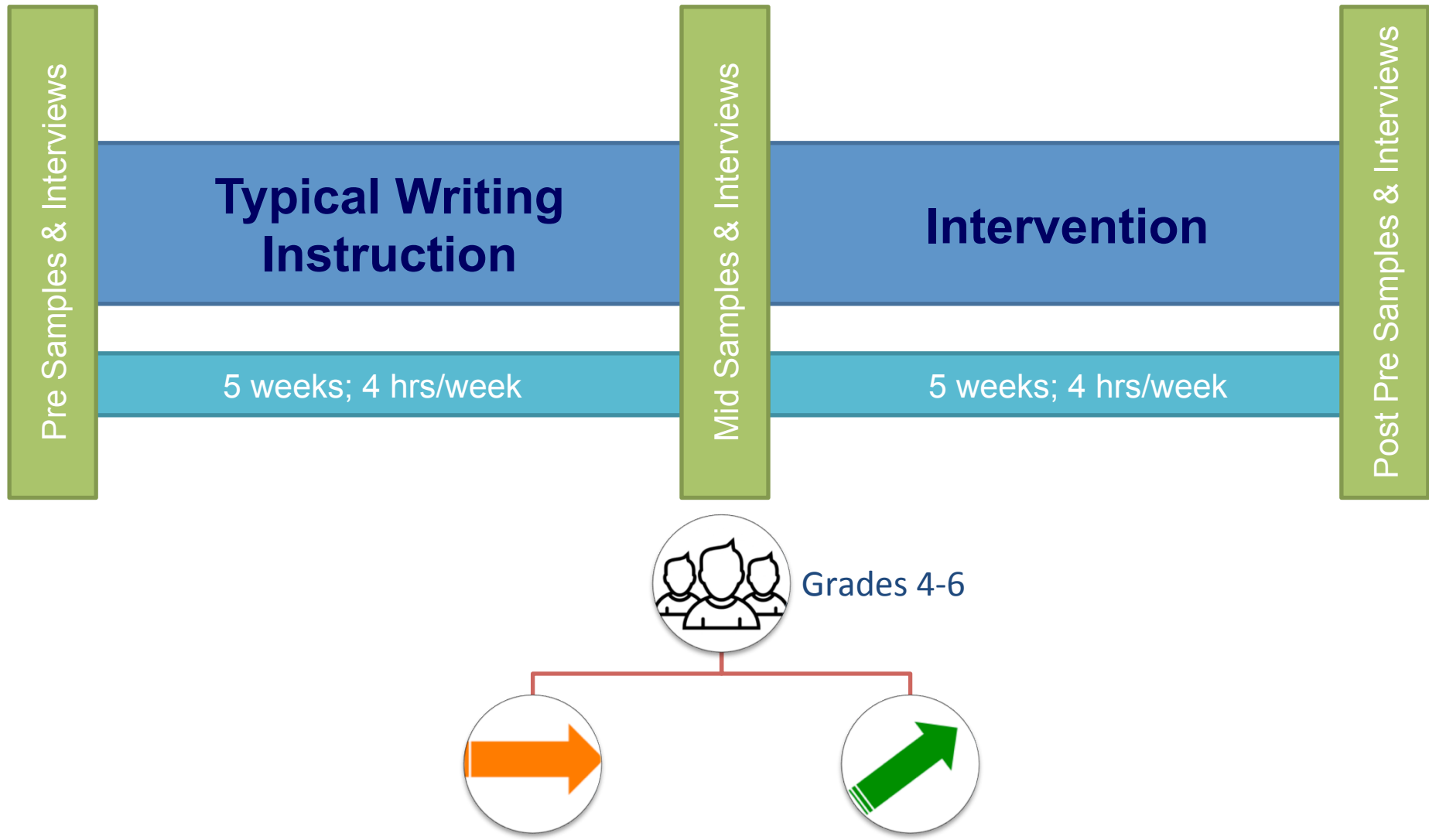
1. Does instruction that supports language development support **writing outcomes**?
2. Does language/literacy instruction **transfer** across new types of texts?
3. Can instruction help students demonstrate **greater metalinguistic awareness**?
4. Can students whose performance has plateaued experience growth?

Question 1

If students are exposed to writing instruction designed to address linguistic competence & metalinguistic awareness, will students demonstrate **greater competence in expressive language?**

- Written English
- Spoken English
- American Sign Language

Study Design



Analysis

Recount Rubric			©2014 Wolbers, K., Dostal, H., & Graham, S. Design Contribution by R. Saulsbury		
Orientation			Events		Organization
<ul style="list-style-type: none"> Tells all 3 clearly High reader interest 	6		<ul style="list-style-type: none"> Tells many events On topic Great sensory details 	6	<ul style="list-style-type: none"> Effective multi-paragraph organization Connected ideas & transitions
<ul style="list-style-type: none"> Tells all 3 clearly Medium reader interest 	5		<ul style="list-style-type: none"> Tells many events On topic Good sensory details 	5	<ul style="list-style-type: none"> Multi-paragraph organization
<ul style="list-style-type: none"> Tells all 3 Low reader interest 	4		<ul style="list-style-type: none"> Tells many events Mostly on topic Some sensory details 	4	
<ul style="list-style-type: none"> Tells all 3: <i>who, where, when</i> 	3		<ul style="list-style-type: none"> Tells several events Mostly on topic 	3	
<ul style="list-style-type: none"> Tells 2 of 3: <i>who, where, when</i> 	2		<ul style="list-style-type: none"> Tells some events Sometimes on topic 	2	
<ul style="list-style-type: none"> Tells 1 of 3: <i>who, where, when</i> 	1		<ul style="list-style-type: none"> Tells no event Off topic 	1	

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Rate: 100 0 100 200

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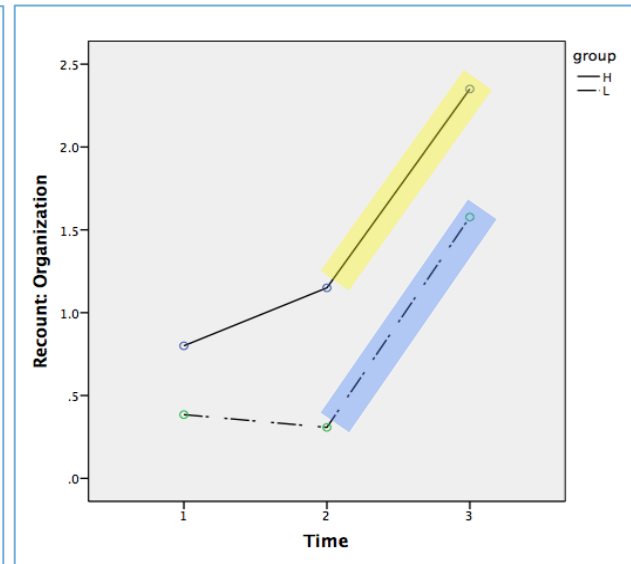
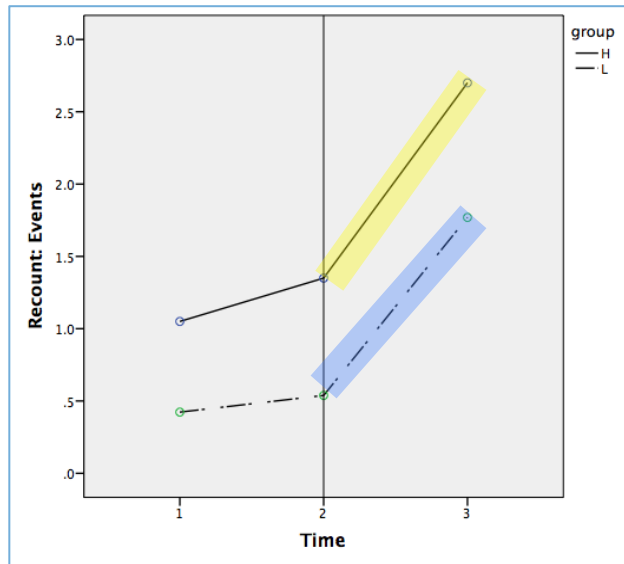
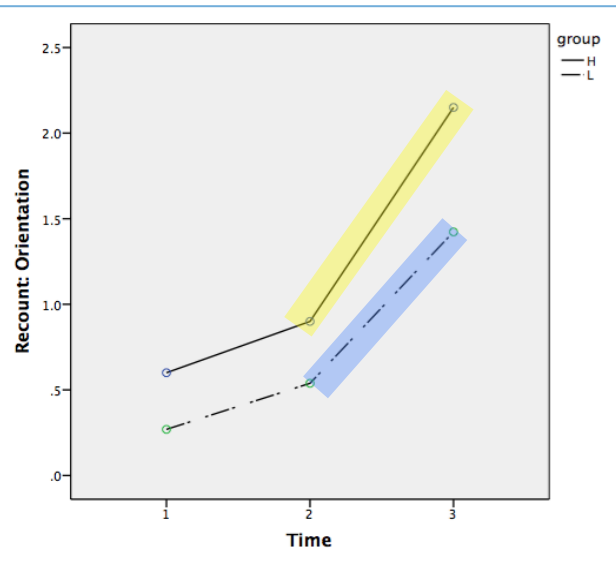
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Elaborations [0]

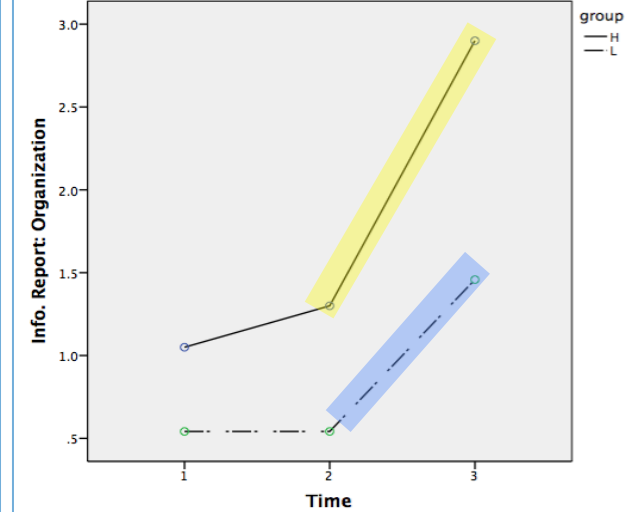
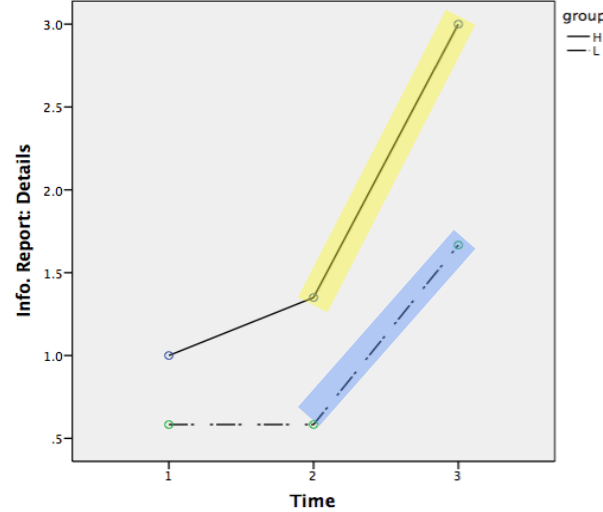
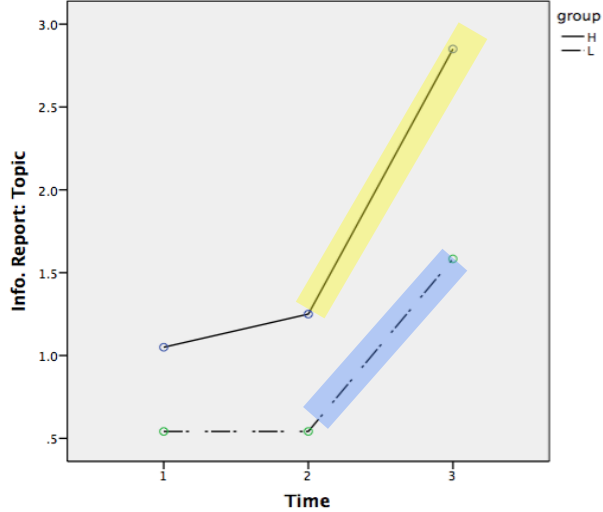
MLU [10]

Unintelligible Utter. [0]

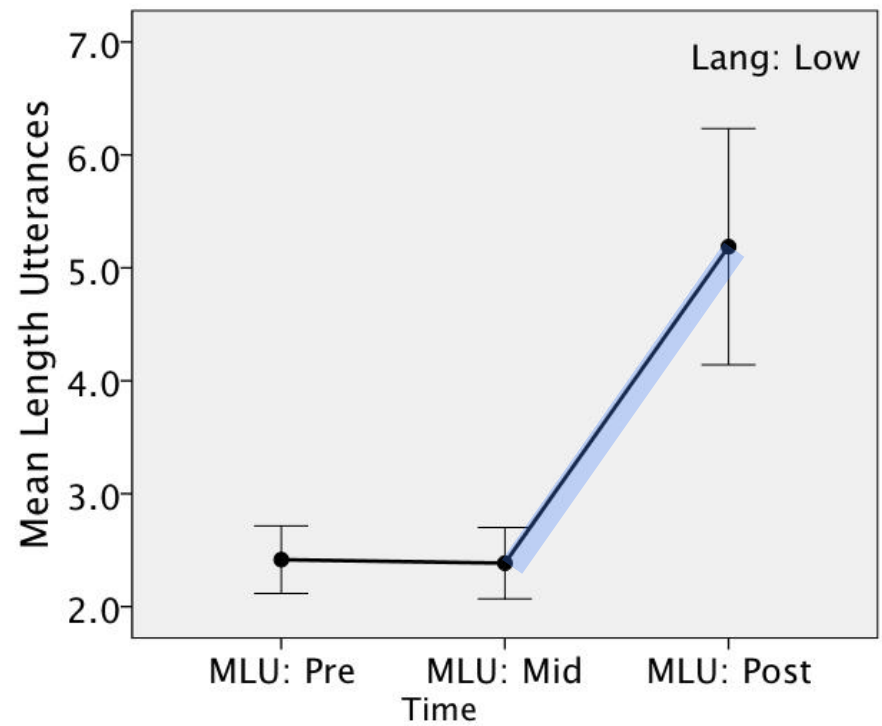
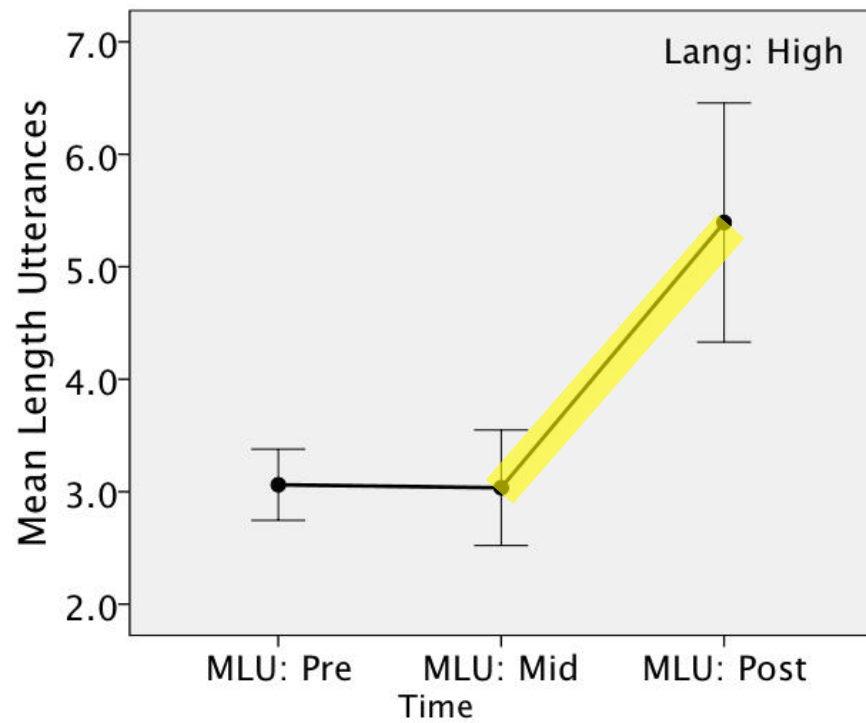
Narrative Writing, instruction provided



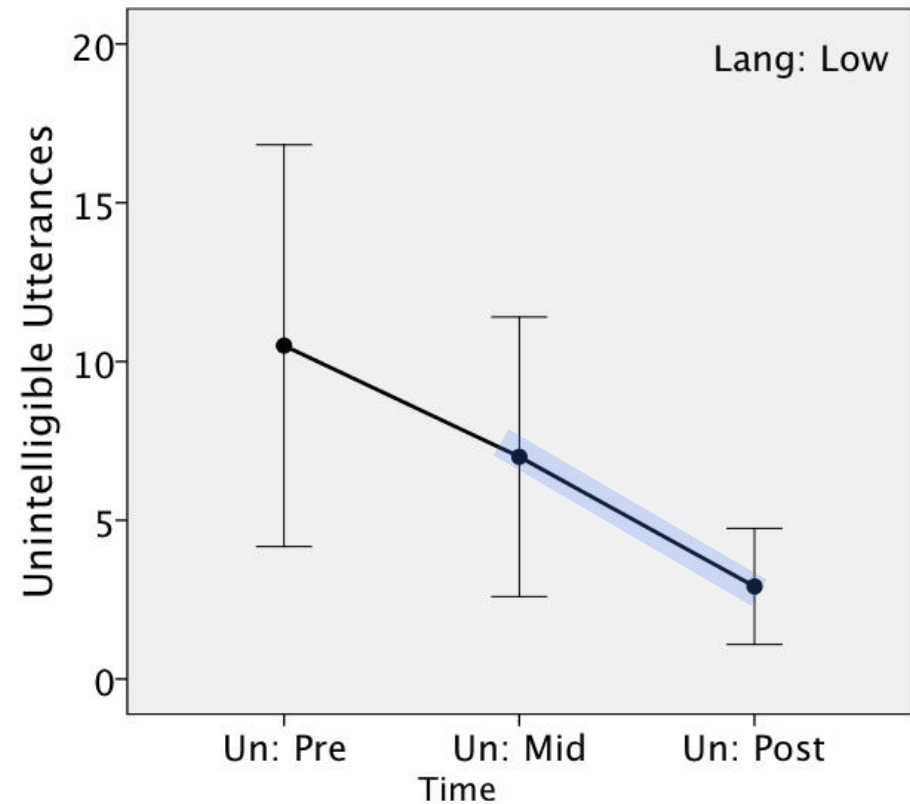
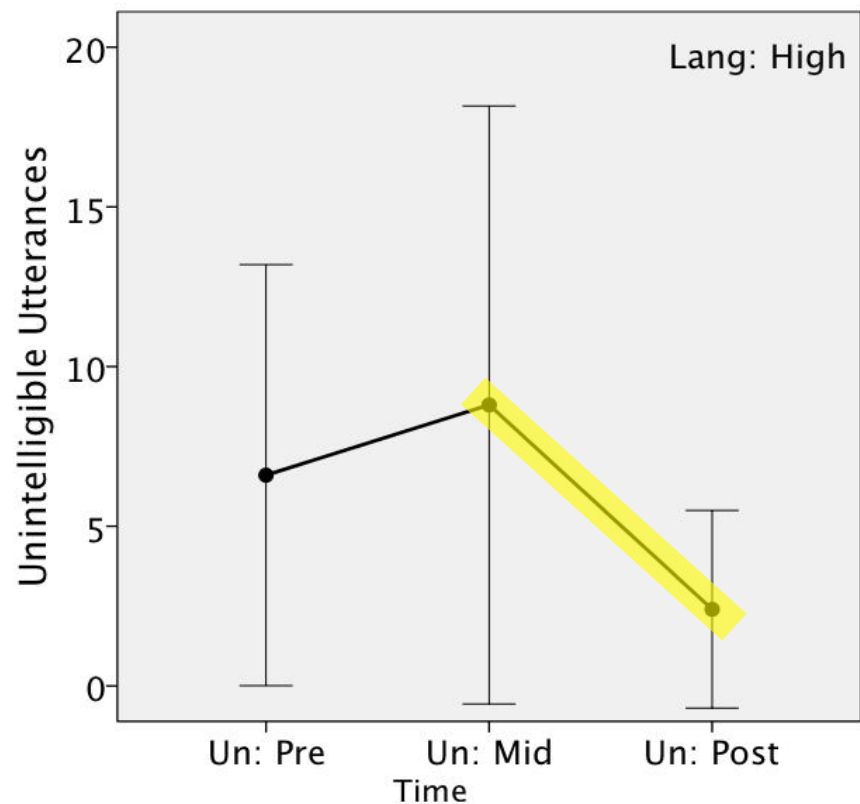
Informational Writing, no instruction provided



ASL MLU



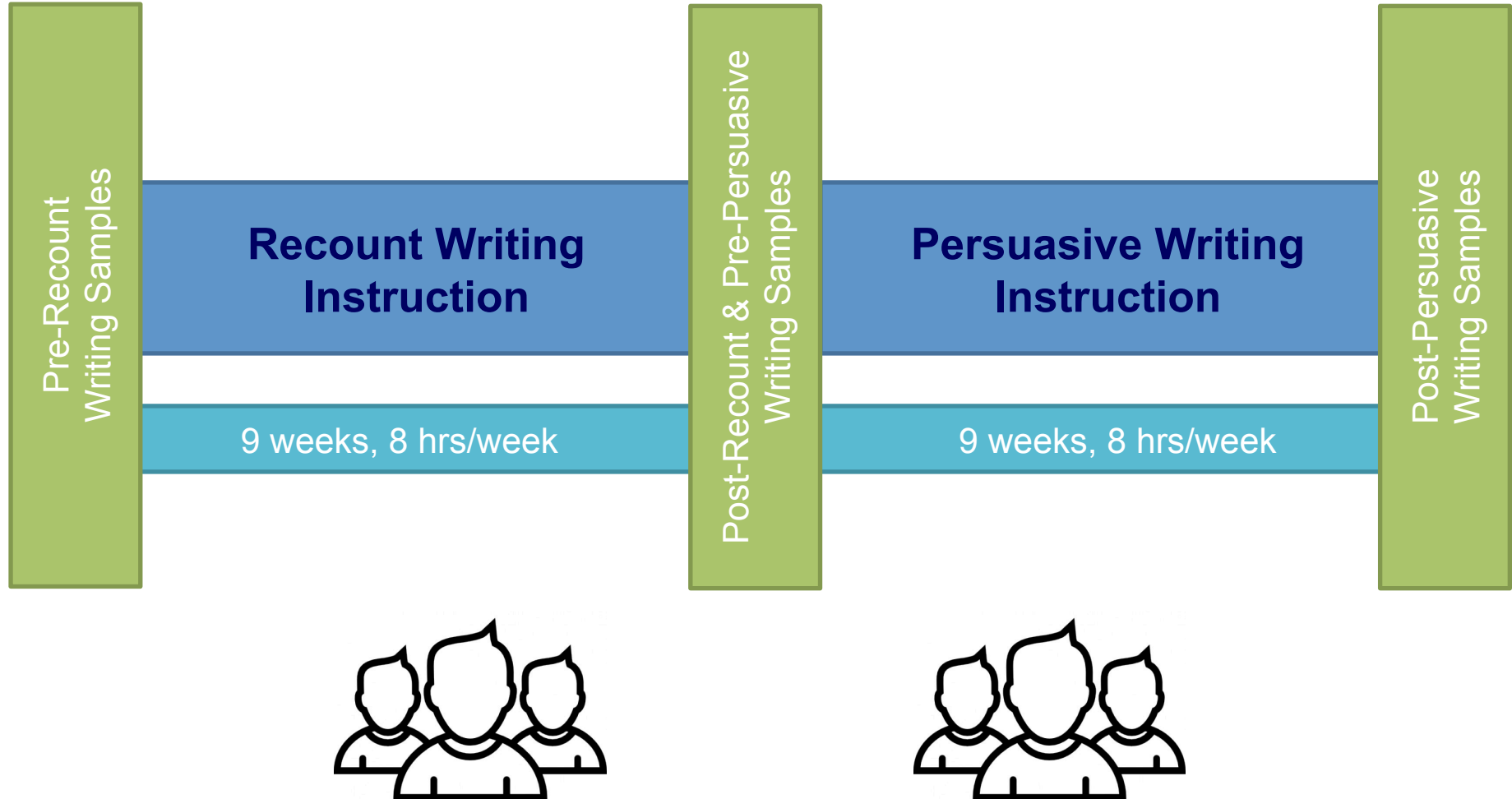
Unintelligible ASL Utterances



Question 2

Does instruction that supports language development support **writing outcomes**?

Study Design



Writing Outcomes

	Group	Pretest M (SD)	Posttest M (SD)	<i>p</i>	ES
Narrative	BAU	4.4 (2.2)	4.2 (2.4)	<0.01*	2.64
	Treatment	3.9 (2.5)	7.2 (3.7)		
Information	BAU	3.9 (1.7)	4.8 (2.1)	<0.01*	1.01
	Treatment	4.4 (2.8)	6.2 (3.5)		
Broad WL	BAU	64.1 (22.7)	61.9 (22.0)	<0.01*	1.88
	Treatment	50.4 (31.2)	71.6 (22.5)		

Recount Language

Outcome Test	Group	Pretest	Posttest	p	ES
Perfect T-units	BAU	0.2 (0.3)	0.2 (0.2)	0.26	0.46
	Treatment	0.1 (0.1)	0.2 (0.2)		
Flawed T-units	BAU	0.6 (0.3)	0.6 (0.3)	0.01*	1.20
	Treatment	0.4 (0.3)	0.6 (0.3)		
Word Strings	BAU	0.8 (0.3)	0.7 (0.3)	0.03*	1.09
	Treatment	0.5 (0.3)	0.7 (0.3)		
Words per T-unit	BAU	5.1 (2.6)	4.6 (2.4)	0.02*	1.13
	Treatment	3.8 (2.3)	5.3 (2.1)		
% Complete Sentences	BAU	0.7 (0.3)	0.7 (0.3)	0.02*	1.09
	Treatment	0.5 (0.3)	0.7 (0.3)		

Pre-Intervention

<i>Pre-Writing Scores</i>	1	1.5	1.5
<i>Pre-Grammar Scores</i>	Perfect-Tunits: 0.54 Words/Tunit: 6.8		

I went to Montessori school fo half of kindergatten and 1st and 2nd grade I'm very athletic Im a good dancer I like to wark by my self, but I like to be with freinds, I like vocablery, I like to spell, It is verry noyse at my old skool, I like to get to now people better. I like music. I'm afrid of spirders, I like it to be quit, I'd like for you to use the efem, and I'd lik your face not be coverd when in school seshene

Post-Intervention

<i>Post-Writing Scores</i>	4.5	4.5	5
<i>Post-Grammar Scores</i>	Perfect-Tunits: 0.64 Words/Tunit: 10.2		

I was at a Basketball game. It was my Birthday and I felt lucky, I got choosen out of a alemit of 300 people! To play durring half time, finelly half time arrived they brang us on the court it was just me and my friend going aganst ech other. They told us what to do they said "first you have to spin around a bat 10 times next you have to shoot whoever gets a basket wins". After I herd the instructions I was nervous, so many people were waching I even saw a camra!

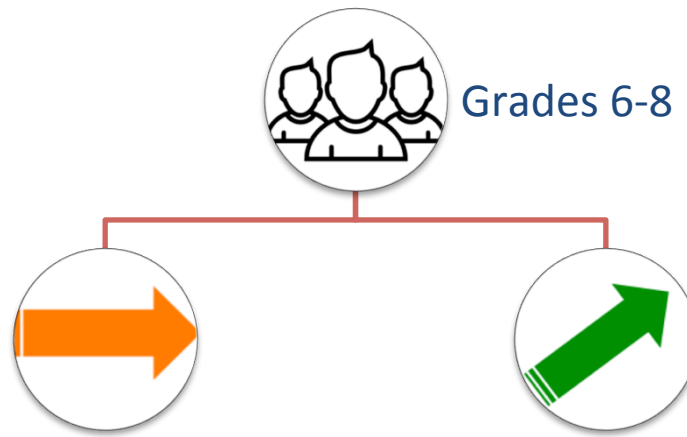
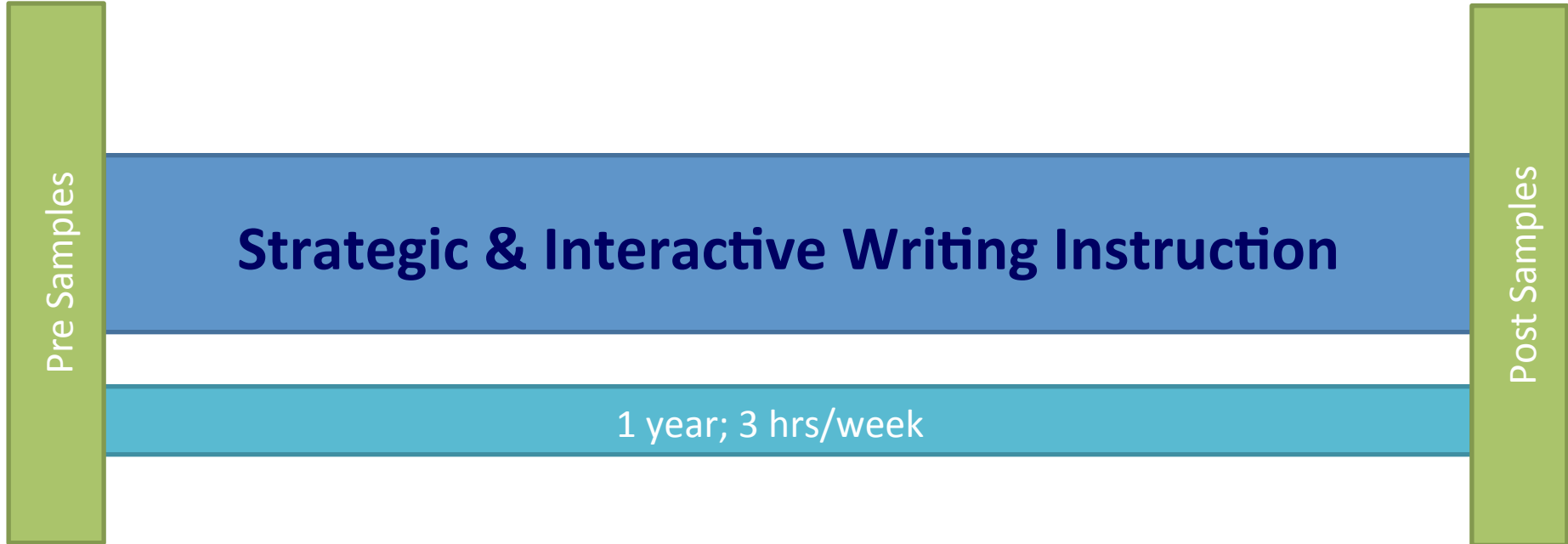
Once we got on the court I was frozen with fear. I came to my senses and started to spin and spin and spin! I was so ooo dzy but I stopped for a second and then shoot I missed I shoot again and it wont in! I felt like a champion they gave me the prize it was tickets to the next game!

I was so happy! After that I saw my Karte techer, he patted me on my back and said "good jobed" and I said "you to". last we got Ice cream. In conclusion I had the best day of my life.

Question 3

If students are exposed to writing instruction designed to support language development, will students demonstrate **greater metalinguistic awareness?**

Study Design



Categories of Language Transfer

Unique Glossing/ Substitution (ASL specific lexicon)

Bishop & Hicks (2005)

- *Justin say that **invent***
- *We grew up together **since** 11 years*
- *She try to run away and look for TJ, and she fell **herself** and live...*
- *Leila's mom will sign got **paper finished***

Syntactic Structure

Valli, Lucas, Mulrooney, & Villaneuva (2011)

Plurality/ Adverbs

- *I ride my bike **rode rode***
- *Then we finish eat and **4 girl***

Adjectives

- *My mom talk about new **shoes Nike***
- *...but I grew up **age 1** then I feel better and **age 2...***

Topicalization

- *Yesterday I go **game football.***
- ***Cat I love pet***

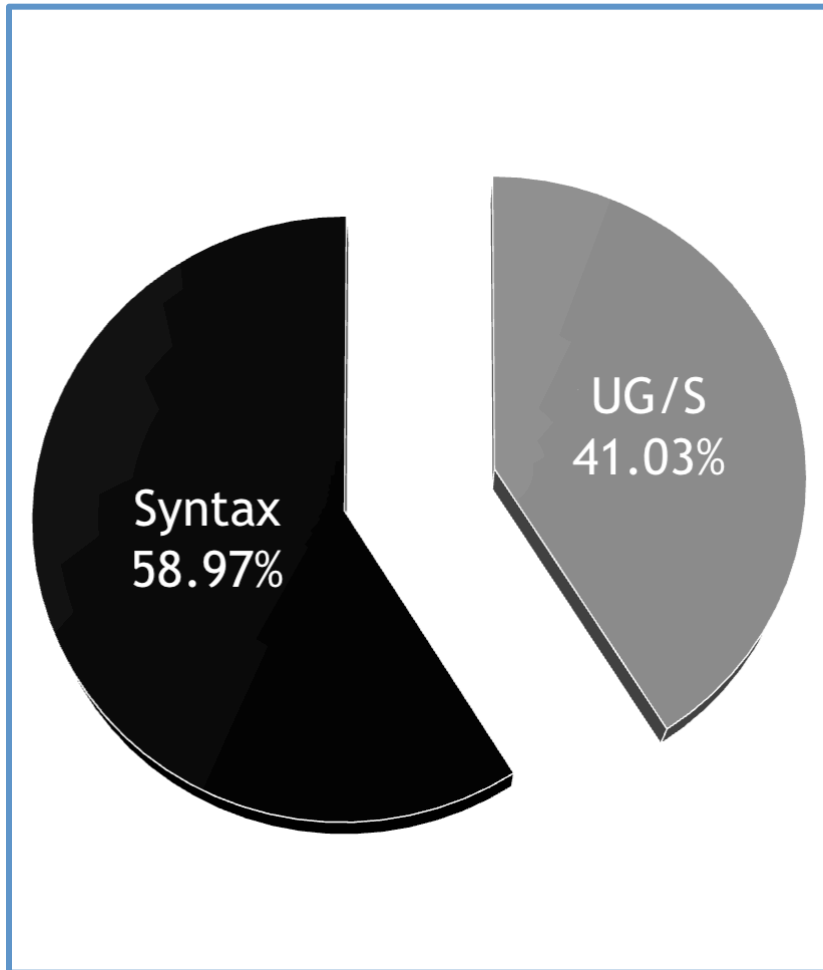
Conjunctions

- *I was five years old and **happened** my father died*

RH Questions

- *When I have flu? Last Thursday.*

Prevalence of ASL Features in English Writing

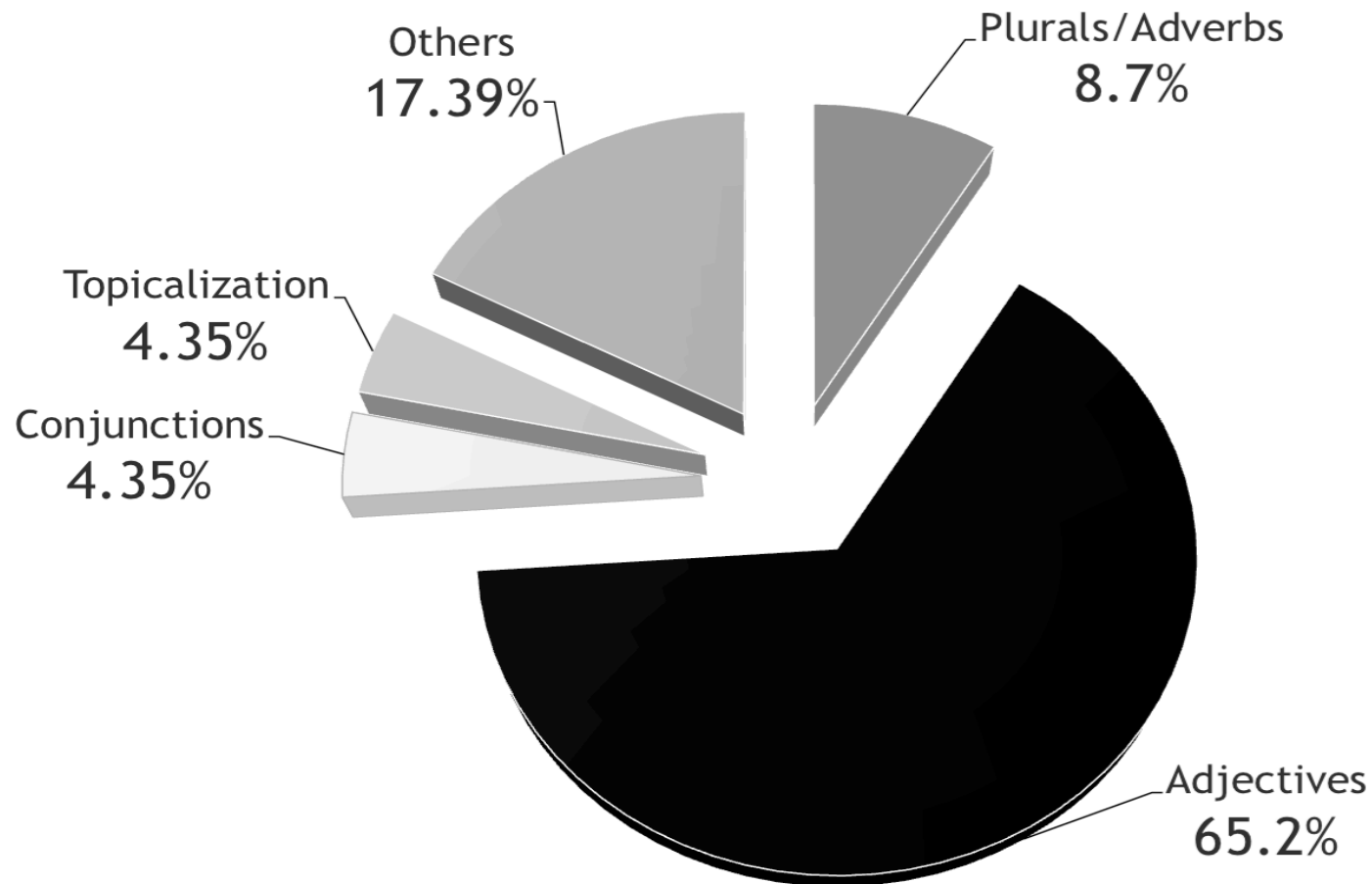


86 ASL occurrences

- 39 occurrences at pre (45.3%)- sample length at pre (~100 words) and post (+200)

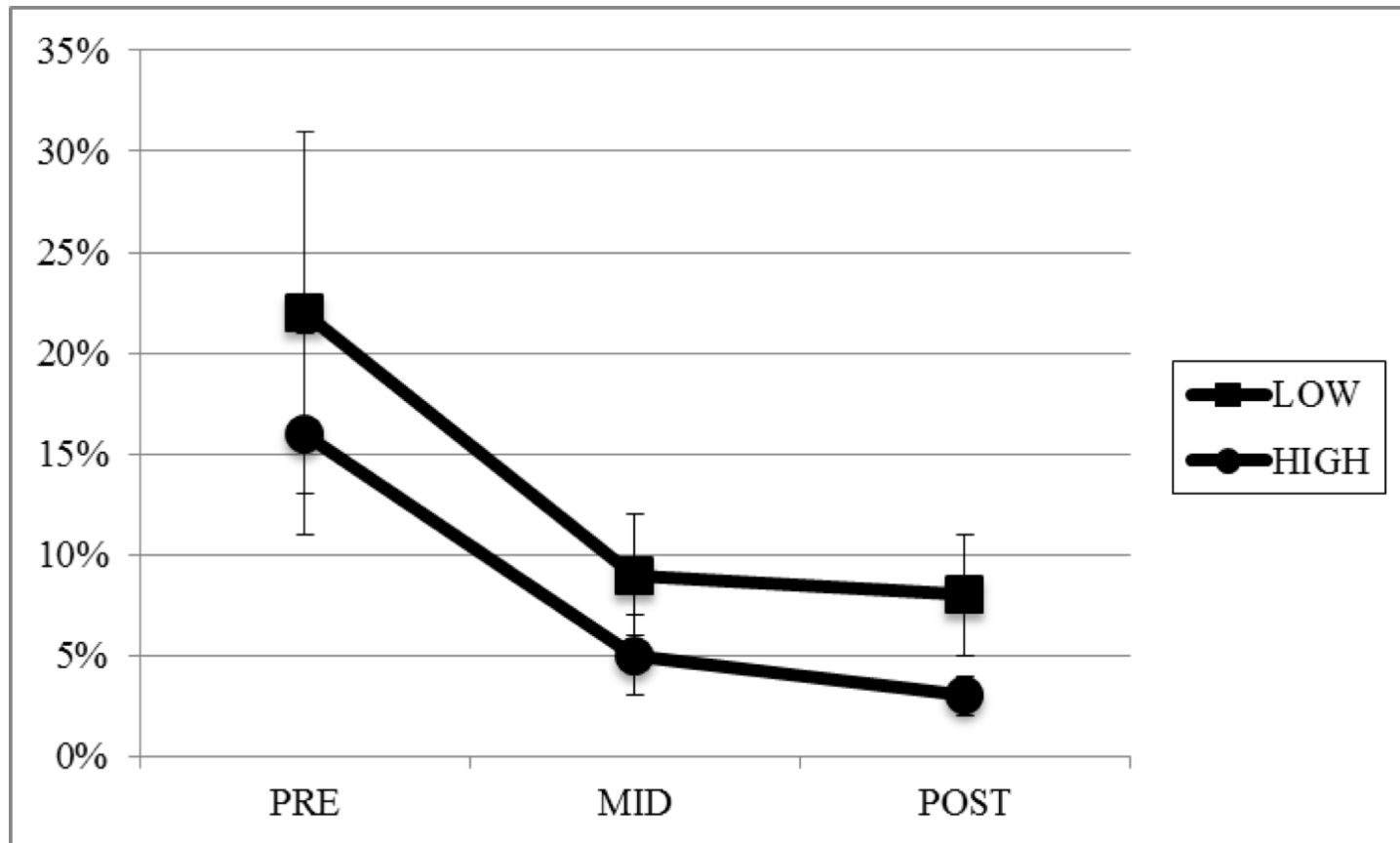
1.3 ASL occurrences per pre sample (less than 20 t-units)

Prevalence of ASL Features in English Writing



Percentages of ASL syntactical structures identified in pre-academic year writing samples

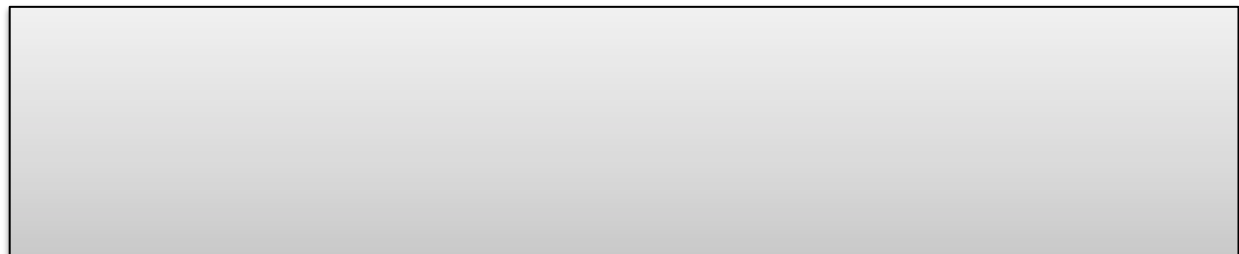
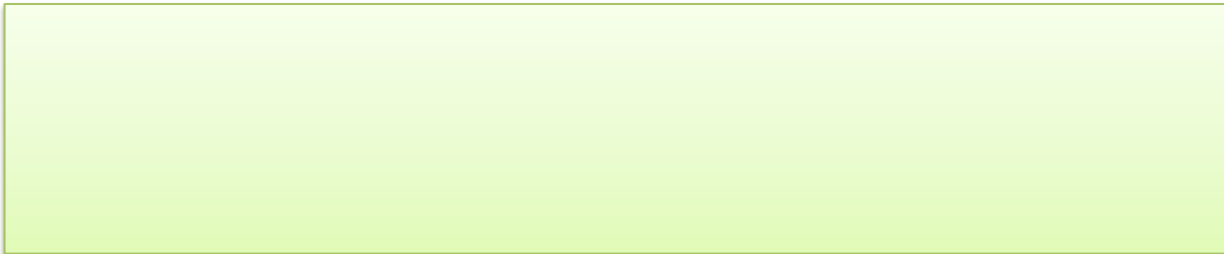
% of ASL Phrases by Group



The Alternative Narrative about DHH Students

Students MLU increased from about **2.5** to **5.5** after five weeks of instruction (Dostal, 2011; Dostal & Wolbers, 2014)

Language proficiency supports students in generalizing & applying knowledge about writing to new genres (Dostal & Wolbers, 2016)



Key Takeaways from Research

DHH students make dramatic gains in language development & literacy proficiency when:

1. Literacy instruction is responsive to language proficiency
2. Language is explicitly taught & negotiated
3. Literacy is taught in interactive, strategic ways

Stop & Talk

- How does this compare with your child's experiences?
- What questions and ideas does this raise?

Language & Literacy Development in School Settings

Full & consistent access to language

- English
- ASL

May require human & material resources

language

Full & consistent access to explicit, responsive language & literacy instruction

- Comparing languages
- Strategies of readers/writers
- Interaction/discussion/negotiation of meaning

May require professional learning & resources

cognition

literacy

Full & consistent exposure to meaningful text

May require professional learning & resources

Planning for Language Access

How?

Under what conditions will students have full (100%) access to a) instruction & b) peer communication?

Who?

Which professionals are needed in order to coordinate optimal conditions for learning?

Working with Classroom Teachers

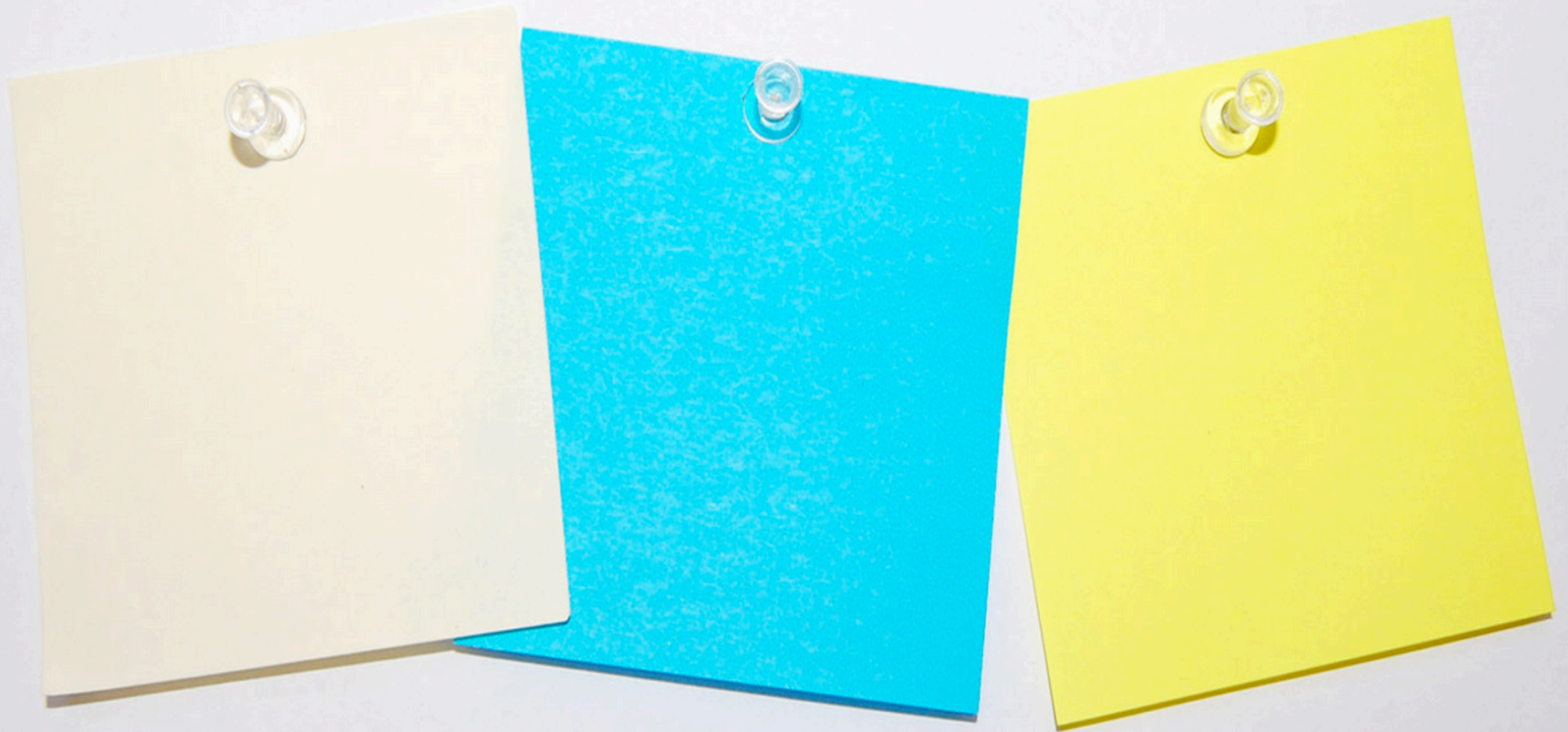
Questions to ask about access:

- What would be helpful to know about my child's language history and preferences?
- What amplification technology or interpreting services are my child using regularly in the classroom, and how do we know if it supports access?
- What strategies and supports are used to support communication with teachers and peers across the school day?

Questions to ask about instruction:

- How are visual representations of information used to support learning?
- When and how does my child engage in conversation/discussion in your classroom?
- What are the purposes for reading and how much time do students spend reading in your classroom?
- What are the purposes and audiences for student writing and how often do students write?

Recap: Your Experiences & Questions



Resources

Educating Students Who Are Deaf or Hard of Hearing: A Guide for Professionals in General Education Settings

- <http://www3.gallaudet.edu/clerc-center/learning-opportunities/online-learning/educating-students-who-are-deaf-or-hard-of-hearing-in-general-education-settings.html>

Visual Language & Visual Learning (VL2) Research Briefs

- <http://vl2.gallaudet.edu/research/research-briefs/>

Language & Communication Plan

- <http://www.sde.ct.gov/sde/cwp/view.asp?a=2626&q=322680>

Educating Students Who Are Deaf or Hard of Hearing: A Guide for Professionals in General Education Settings



SUPPORTING THE LANGUAGE & LITERACY LEARNING OF DEAF & HARD OF HEARING STUDENTS

YOU'RE INVITED!

**THE UNIVERSITY OF CONNECTICUT'S
READING & LANGUAGE ARTS CENTER IN THE NEAG SCHOOL OF
EDUCATION IS PLEASED TO INVITE YOU TO SPEND AN AFTERNOON WITH:**

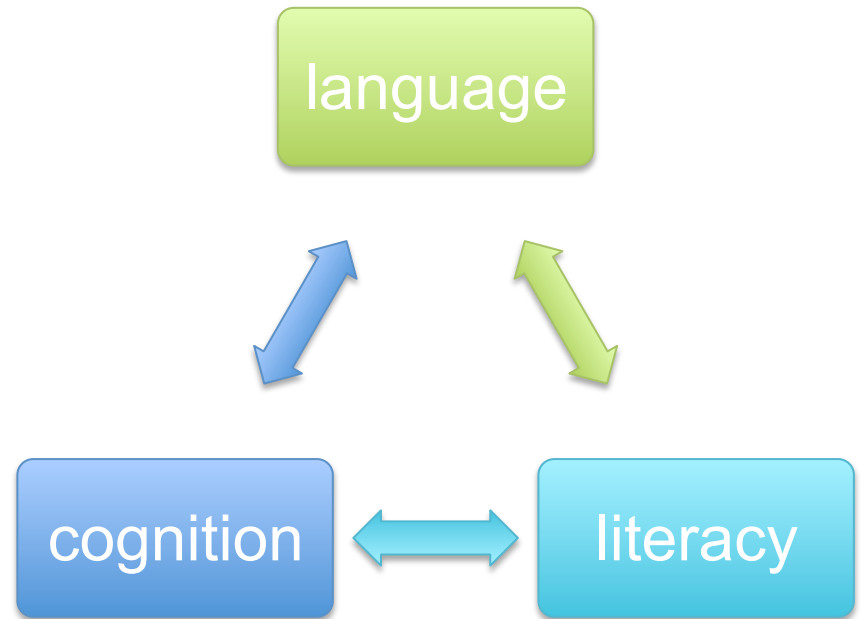
DR. SUSAN EASTERBROOKS,
**CO-PRINCIPAL INVESTIGATOR FOR THE CENTER FOR LITERACY & DEAFNESS AND
A FORMER UCONN HUSKY!**

FRIDAY, OCTOBER 13TH

UCONN

NEAG SCHOOL OF EDUCATION

11:30 AM - 3:00 PM



<https://goo.gl/j8oat7>
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