

English Morphology- Is It All About Prefixes and Suffixes?

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My Education



2003- B.S. Communication Sciences and Disorders



2005- M.Ed. Deaf education



2005-2011- Teacher of the d/Deaf/Hard-of-Hearing (TODHH)



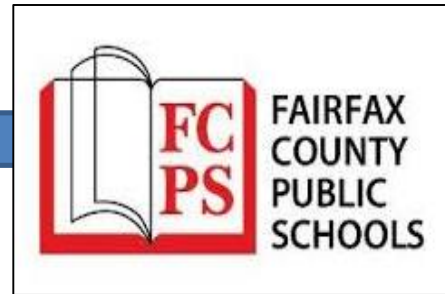
2014- Ph.D. in Special Education with an emphasis on Deaf Education

My Real Education



Day School for the Deaf

2005- Middle school students with additional disabilities



Itinerant TODHH

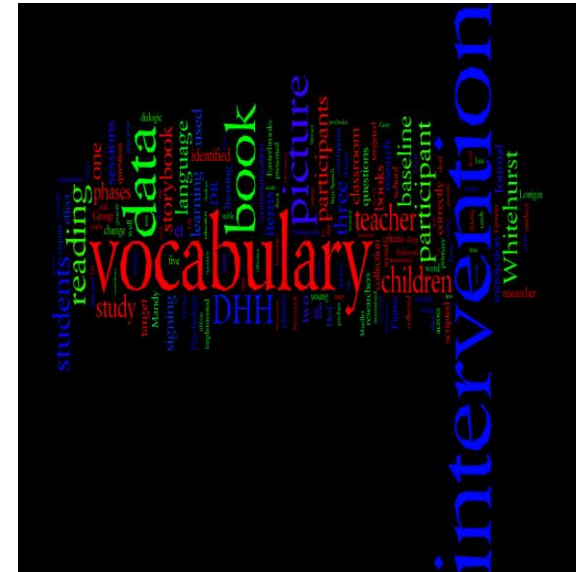
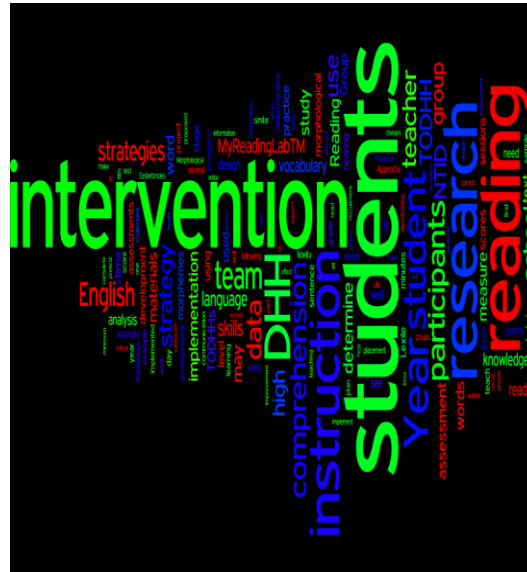
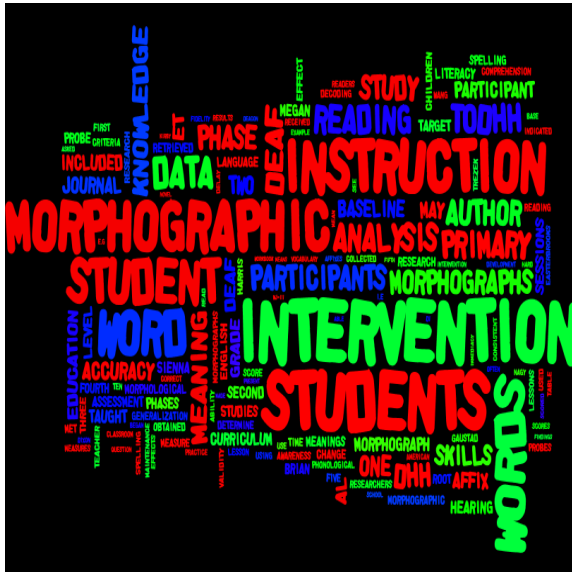
2006- Preschool through high school



Magnet school within a public school

2007-Kindergarten through fifth grade for 4 surrounding districts

My Research



Agenda

- What are morphemes?
- Why do we care about morphemes?
- What does the research say?
- How can we teach morphology in our courses?

What are morphemes?

Morphemes or Morphographs

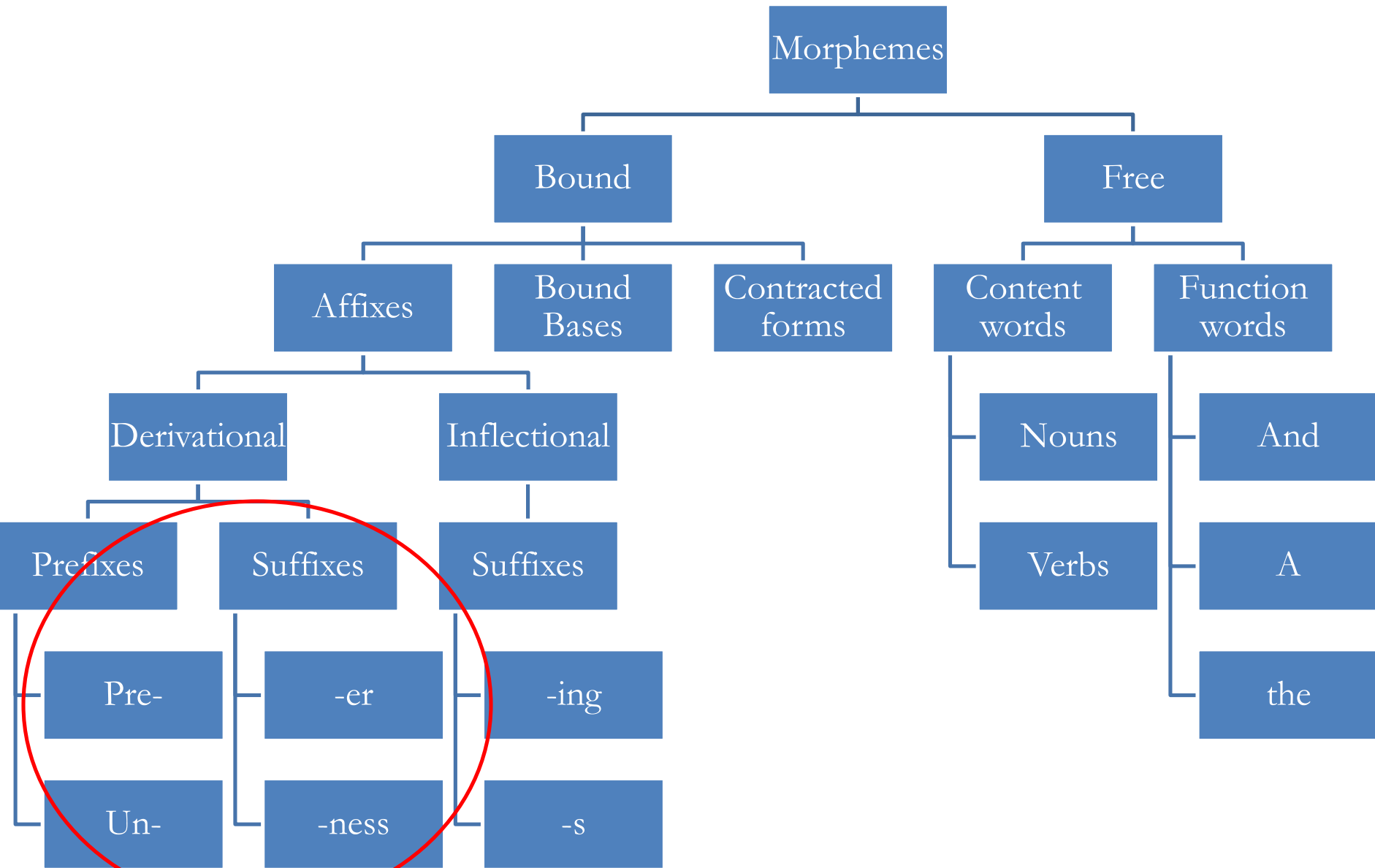
- Smallest unit of language that retains meaning (Reed, 2008)
- Print representation of affixes, roots and base words (Maggs, McMillan, Patching, & Hawke, 1981)

English

- Two components
 - Phonemes- sounds used to pronounce words
 - Arbitrary relationship between sound and meaning
 - Bare and bear
 - Sofa and couch
 - Morphemes- smallest unit of language that has meaning
- Morphophonemic language (Chomsky & Halle, 1986)
 - Spelling represents both sound and meaning

Example

- **Quart** means four
 - **quarter** - There are four quarters in a dollar.
 - **quarter** - If we cut something in $1/4$'s, it is called quarters.
 - **quarter** to; **quarter** after - When we divide a clock into $1/4$'s we talk about time in quarters.
 - **quarterly** - Something that happens four times per year.



Free versus Bound

- Free morphemes- can stand alone with meaning
 - Eat, week, drink
- Bound morphemes- cannot stand alone with meaning
 - -tion, -er, pre-

Bound- Inflectional Morphemes

- Do not hold meaning on their own
- Give information about the grammatical features of the words around them
 - Singular or plural
 - Past or present tense
 - Comparative or possessive
- Do not change the grammatical category of a word


Bound- Derivational Morphemes

- Combine to make new words
 - Heal and health
 - Magic and magician
- Can change the grammatical category of a word
 - Teach versus teacher
 - Quiet versus quietly

Let's talk more about English...

English doesn't borrow from other languages.

English follows other languages down dark alleys, knocks them over and goes through their pockets for loose grammar.



someecards
user card

WHY MIGHT MORPHOLOGY INSTRUCTION BE HELPFUL?

Opaque Orthography

- The 26 letters of the English alphabet represent 45 sounds with 398 different possible spellings (Morrison, Trezek, & Paul, 2008)
- ā: ai, a_e, ay, eigh, ea
- f: ph, ough, alf
- ī: i_e, igh, eye

Although they have the same spelling...

OU

Though /əʊ/

Through /u:/

Cough, Ought /ɒ/

Rough /ʌ/

Plough /aʊ/

Adjourn /ɜ:/

Although they have the same
morpheme...



How can morphology instruction help?

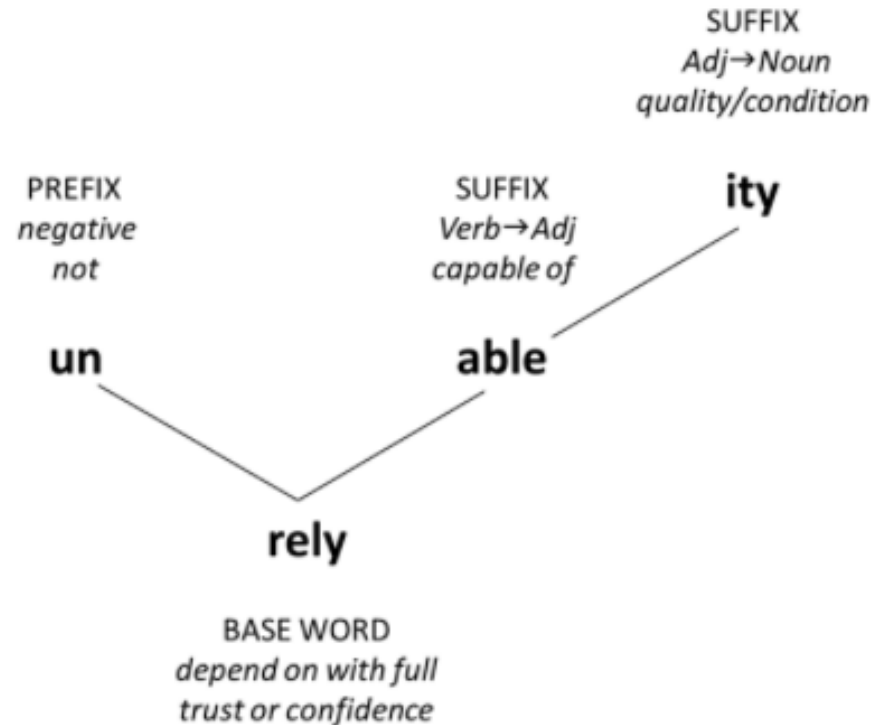
- Accessible through visual pathways (Gaustad, 2000)
- Orthographic similarities (magic vs. magician)
(McCutchen, Logan, & Biangardi-Orpe, 2012)
- Combined in a rule-based manner (Chomsky, 2005)
- 60% of novel words can be decoded morphologically (Nagy & Anderson, 1984)

Generative vocabulary learning tool

unreliability

un + **rely** + able + ity

inability to be relied upon or trusted



Activity

- Sort these words based on their morphemes. Be prepared to explain why you put words together.
 - Judgment
 - Disagree
 - Colorful
 - Argument
 - Distrust
 - Eventful
 - Apartment
 - discomfort
 - Fearful
 - Hateful
 - Disadvantage
 - Wonderful
 - Resentment
 - Discontent
 - statement

Why the activity?

- Could use in your course as a way to see how much students know about morphology before you teach
- Open sort- don't give them a rule
- Closed sort- give them a rule and the categories
- Explaining WHY is critical

Other reasons we should use morphology to teach vocabulary...

In English Language Arts Classes:

- 39% of vocabulary instructional time is dedicated to definitions, mostly through dictionary and worksheets

In the content-areas:

- 1.4% of instructional time is devoted to vocabulary development

» Scott, Jamieson-Noel & Asselin, 2003

Tiered Vocabulary

Isotope, Buddhism

Tier 3

- Low-frequency
- Domain specific

Coincidence, Analyze

Tier 2

- High-frequency
- Found in all content areas

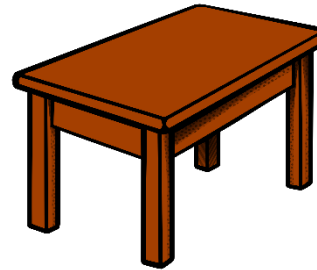
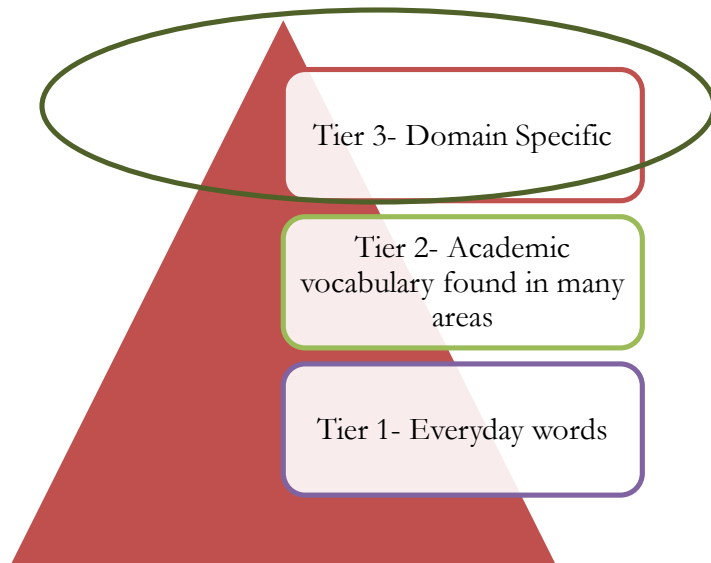
Door, House, Book

Tier 1

- Words used in every day conversations
- Familiar to most students

Vocabulary in the Content-Areas

Vocabulary Term	I've never heard of the term	I've seen or heard of this term before	I think I know this term	I know this term and can explain it
Infection	1	2	3	4
Nutrients	1	2	3	4
Stemum	1	2	3	4



Test Scores

Interval	Tally	Frequency
90-100		10
80-89		3
70-79		5
60-69		2
Below 60		1

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Model Word Solving

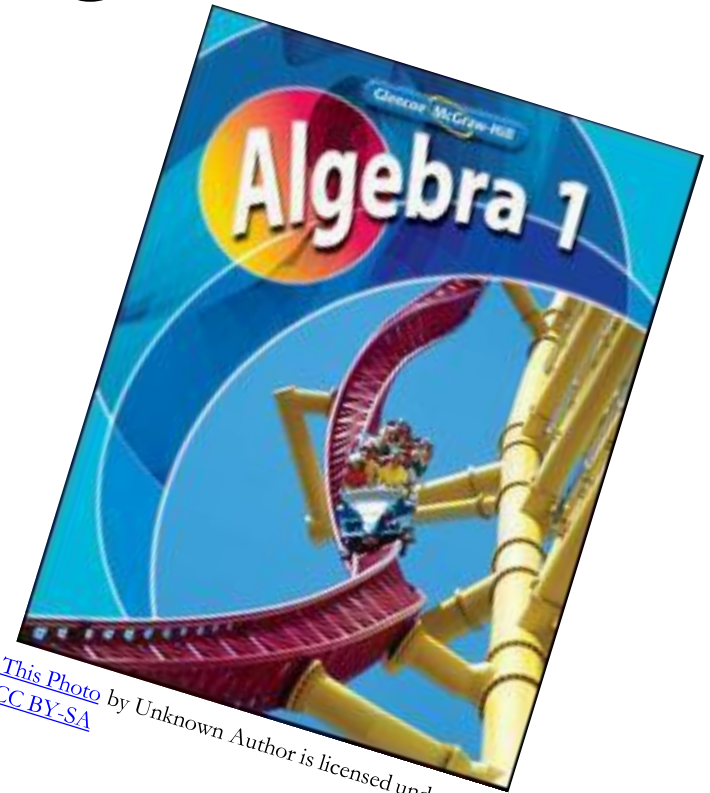
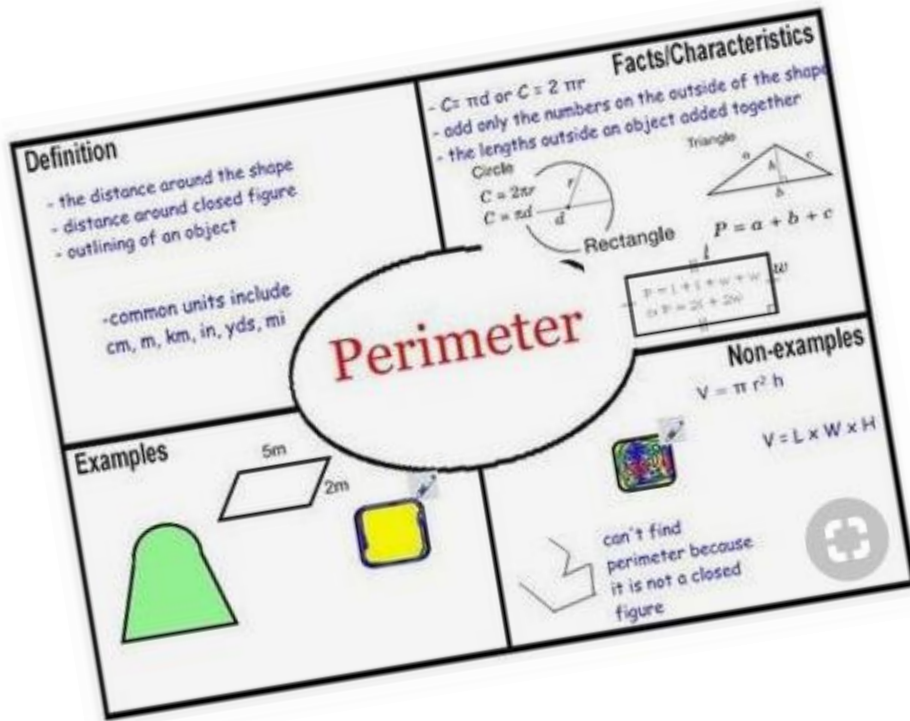
1. Context Clues
2. Word Parts
3. Resources

Wide Reading



C

Vocabulary Learning in Math



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English versus “Math” English

Quadri+later+al= quadrilateral

Vocabulary Learning in Social Studies

- Teach geographic place vocabulary
- Pre-teach vocabulary terms
- Spoken word activity (Grubaugh & Metzger, 1986)
 - Student presents their ideas about the word, defines the words and provides an example from their personal experiences
- Categorize words: people, places and events
- Word parts: infra + structure = Infrastructure

Vocabulary Learning in Science



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Possible Sentences Strategy

One word... Three morphemes

Constellation = con + stella + tion

Can you think of other words that include con- or stella?

Con- With, together, relating to

Stella - stars

-tion - State or condition of

What have all the content-area strategies
had in common?

When researchers start talking about
their research...



One minute paper

- Write down everything you have learned so far. I will give you 1 minute. Will ask two people to share their work.

What do we know?

Hearing

- Continues to develop beyond 4th grade (Berninger et. al, 2010)
- Unique contribution to word reading (Apel & Lawrence, 2011; Apel, Wilson-Fowler, Brimo, & Perrin, 2011)

Deaf

- Develops along a similar trajectory (Gaustad, 1986)
- Predicts reading comprehension (Deacon & Kirby 2004; Nunes, Burman, Evans, & Bell, 2010)
- Improved through targeted instruction (Kirk & Gillion, 2009; Nunes et al, 2010)
- Delay that persist into adulthood (Gaustad, 1986; Gaustad et.al, 2002)



What causes the delay?

- Do not hear English morphemes in spoken language (Guo, Spencer, & Tomblin, 2013)
- Do not see English morphemes in signed languages (Gaustad, Kelly, Payne & Lylak, 2002)
- Not used in expressive language then struggle to understand them in print (i.e., morphographs) (Dixon, Zhao, & Joshi, 2012)

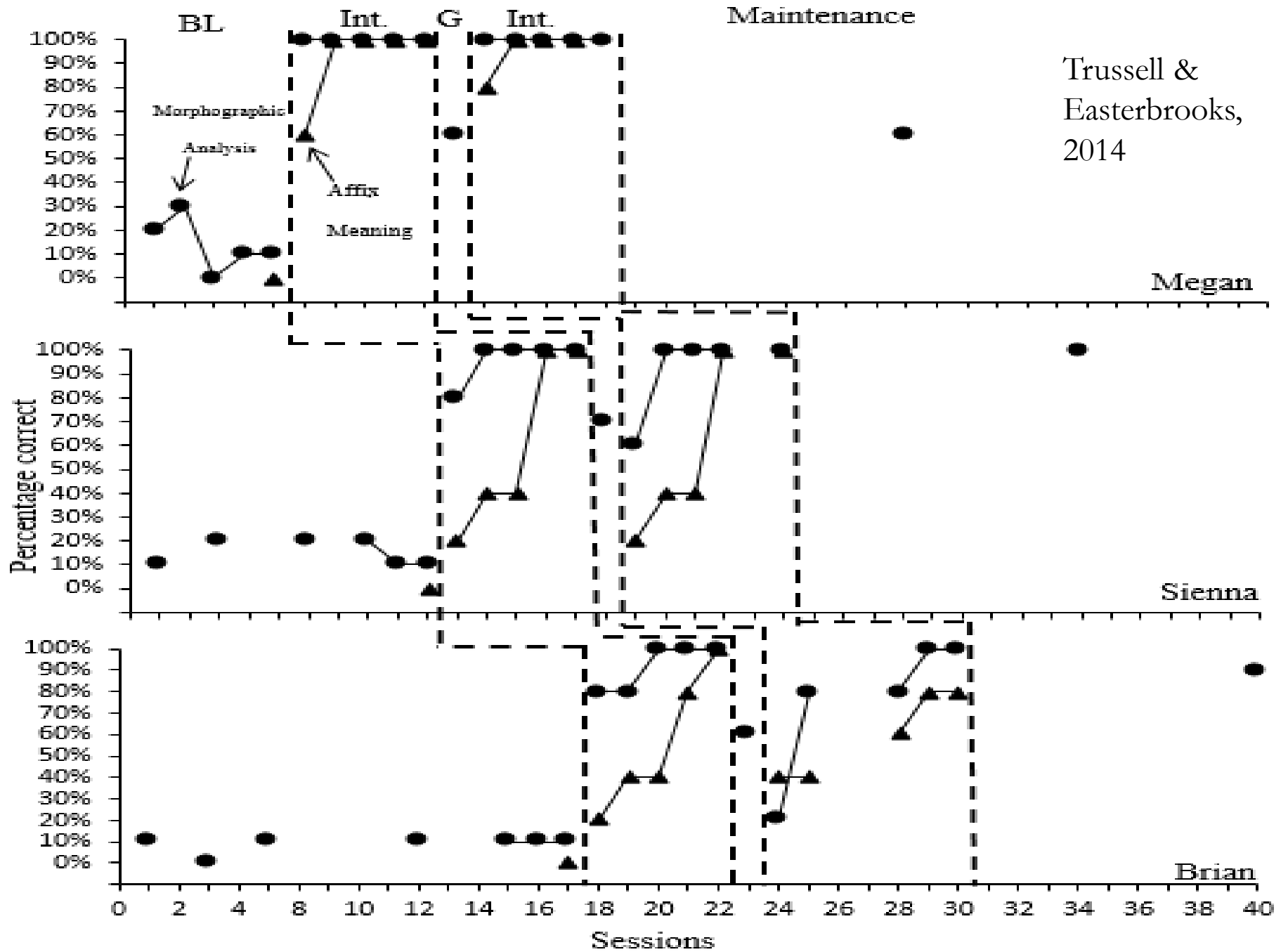


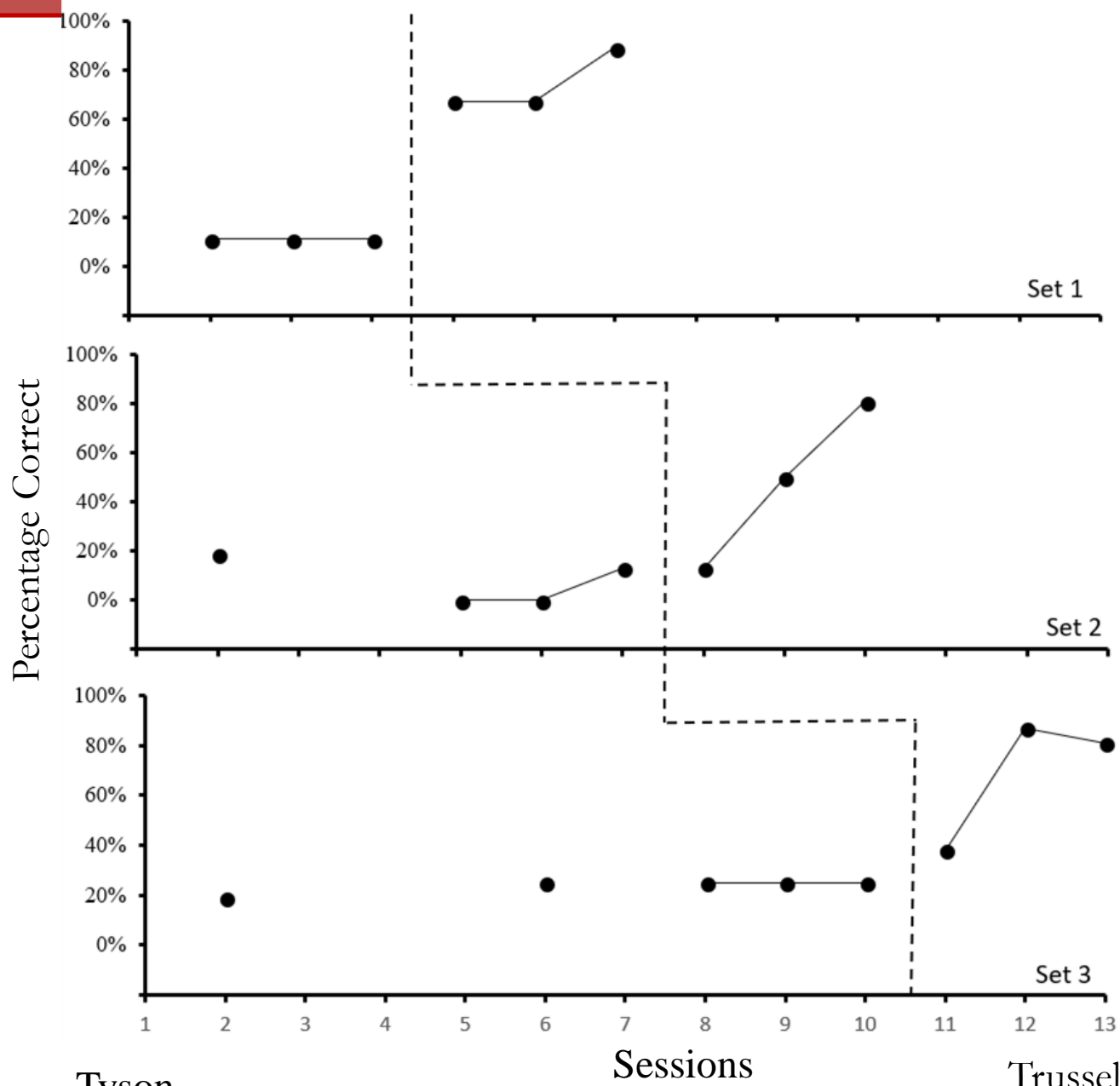
What can we do about this delay?

- Explicit morphographic instruction (Gaustad, 2000)
- Morphographic instruction includes:
 - Decomposition of words (morphographic analysis)
 - Rules for combining morphographs
 - Morphographs' meanings
 - (Harris, Schumaker, & Deshler, 2011; Wood, Mustian, & Cooke, 2010)



Trussell &
Easterbrooks,
2014

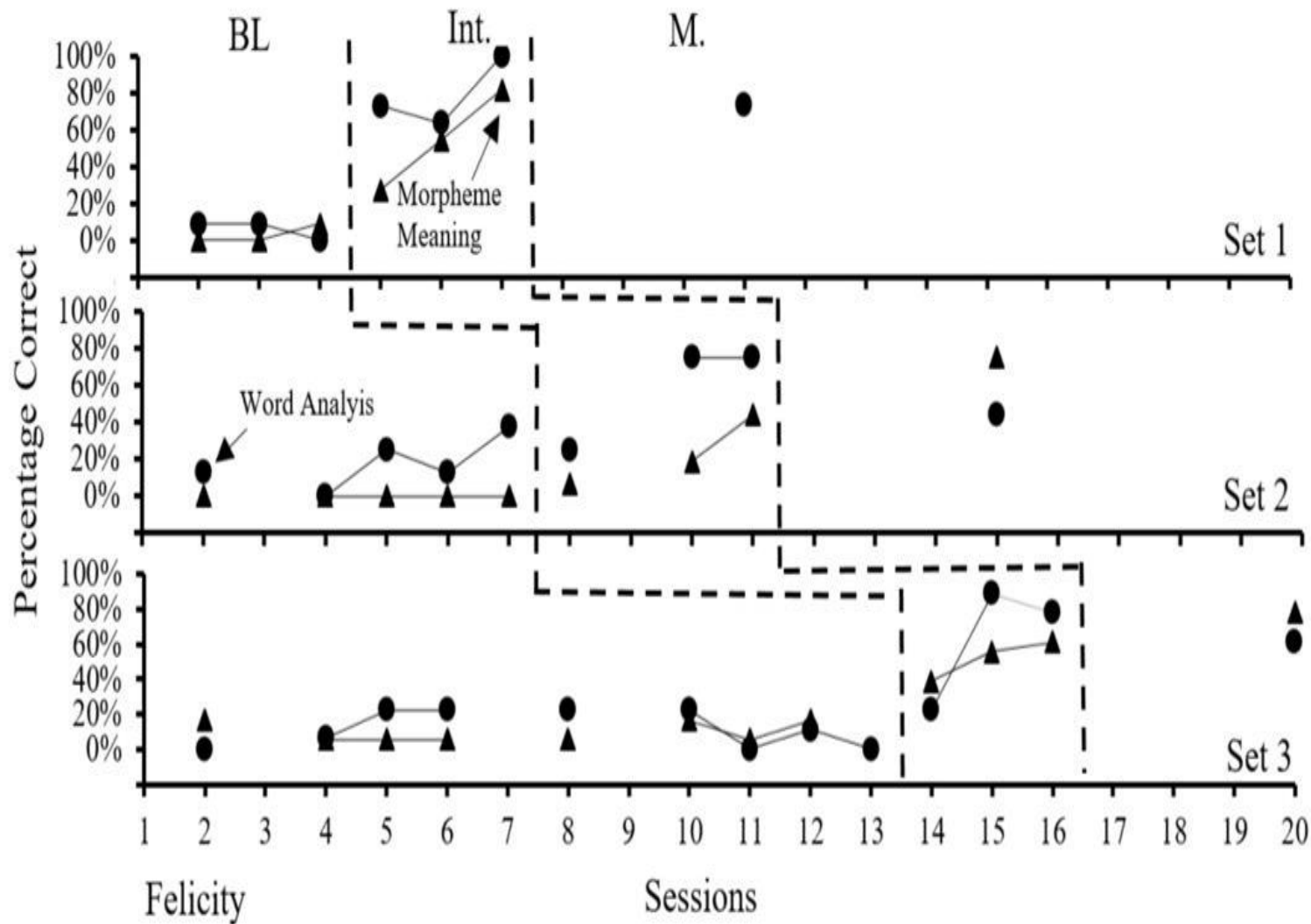




Tyson

Sessions

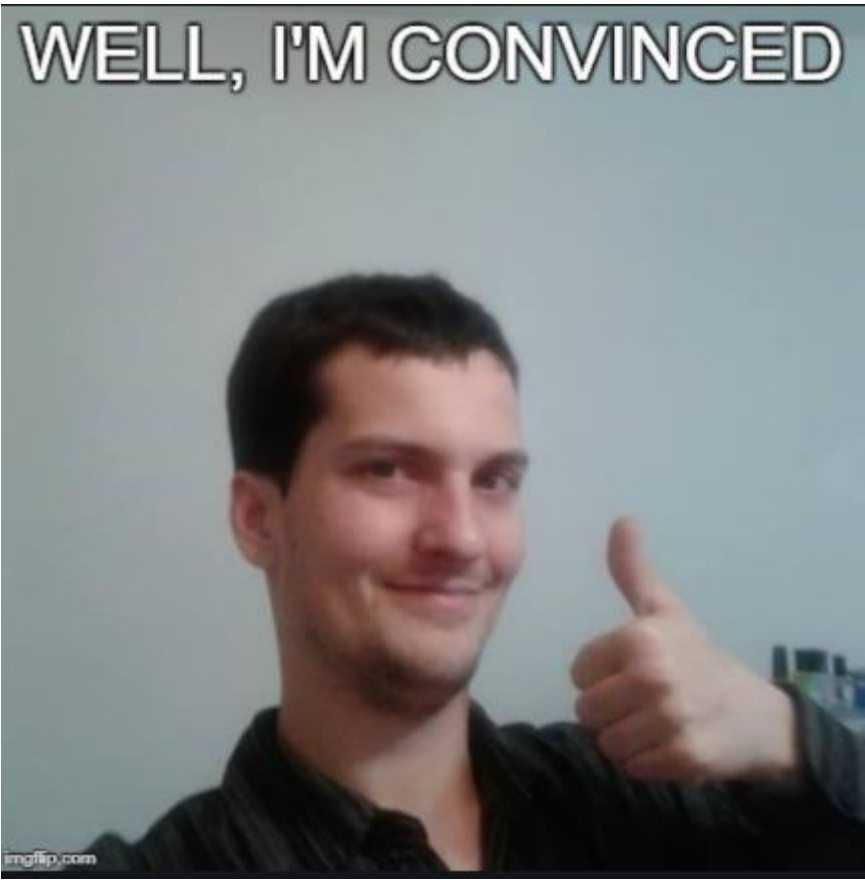
Trussell, 2020



Trussell et al., 2018

Theoretical Framework

- Lexical Quality Hypothesis (Perfetti & Hart, 2001)



How can we teach morphology?

- Create awareness.
- Provide instruction.
- Guided practice.
- Independent practice.

- Find all the plural words.
- Circle them.
- Tell me why you think _____ is plural?

– I think _____ is plural because _____.

National test finds that girls outscore boys on tech, engineering

Presenting Save Read Aloud Share Hide Print



Students from Grace Academy in Hartford, Connecticut, work on a robot using plans on a computer at the Connecticut Science Center in Hartford. Though less likely to take formal technology or engineering courses, U.S. girls are showing more mastery of those subjects than their boy classmates, according to newly released national education data. Photo by: Jim Michaud/Journal Inquirer via AP

By Associated Press, adapted by Newsela staff
Published: 05/14/2019 Word Count: 574

Girls in the U.S. are outperforming boys in the subjects of engineering and technology, a newly released report says. Even so, girls are less likely to take a course in engineering or tech.

The National Assessment of Educational Progress issues a study each year known as "The Nation's Report Card." It published its latest findings on Tuesday, April 30. The report card showed U.S. eighth-graders in 2018 did significantly better overall compared to 2014's test results. This was particularly true among students who are white, black, Asian or low-income.

Morphology Awareness Activity

- Break up the word into its' morphemes.
 1. Constellation
 2. Heliograph
 3. Biannual
 4. Elliptical
 5. Transportation

Provide instruction

- Direct, explicit instruction
- Consider
 - Teaching morpheme families

un	help	ful	ness
		s	
		ing	
		ed	
		er	s

- Teaching about how morphemes work in the English language

Word Detectives Approach

- Pull words from text.
- Teach the affixes and roots as well as their meanings
- Analyze a word's structure using morphological knowledge.
- Teach the rules for combining morphemes
- Use the surrounding words in a sentence to check the meaning of the words (Berninger et al, 2003)

Example

One word... Three morphemes

Constellation= con + stella + tion

Con- With, together, relating to

Stella - stars

-tion - State or condition of

Can you think of other words that include con- or stella?

How to figure out the morphemes in your courses vocabulary?

- <https://www.etymonline.com/>
- <https://www.dictionary.com/>

Lets apply what we have learned.

- Shared folder on G-Drive. (I will put the link in the chat)
 - <https://drive.google.com/drive/folders/1mcMhZIUNWJAYlw4m1tN2BksDTGFbL-kA?usp=sharing>
- Make a folder with your last name in the “Make a Lesson Activity” folder
 - Mine is there as an example
- Create a lesson using words from your own course or words that I have given you.
- I will be going in and out providing feedback.

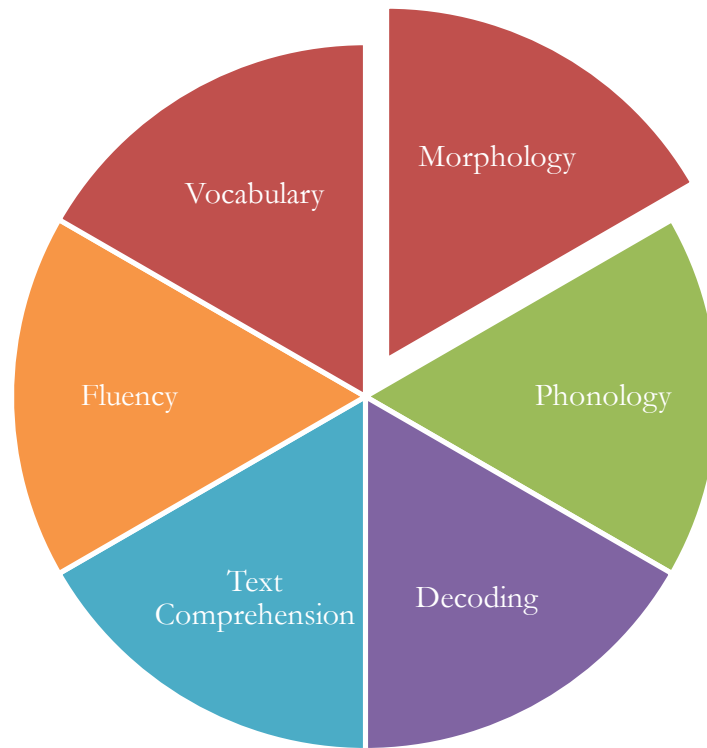
Create a Word Detectives Lesson

- Break the word apart.
 1. Heliograph
 2. Biannual
 3. Elliptical
 4. Transportation
- Find the meanings.
- Create the visual.
 - Use mine or another
- Find a short passage using the word.

Share your lesson.

Pitfalls of Morphological Instruction

- Its one piece of the pie



Pitfalls of Morphological Instruction

- Sometimes words have similar spelling but are not morphological word families
- Sometimes meanings have changed over time
 - Still get a hint... so that is good

Any questions about this
presentation?

Thank you for your time!

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