

Accelerating Academic Vocabulary Learning for English Learners

Amy Crosson
January 19, 2016

[UNIVERSITY OF PITTSBURGH](#)

LRDC Learning Research &
Development Center

Who are we talking about?



- Fastest growing population in US Schools
- > 1/2 have been in US since kindergarten

Who are we talking about?

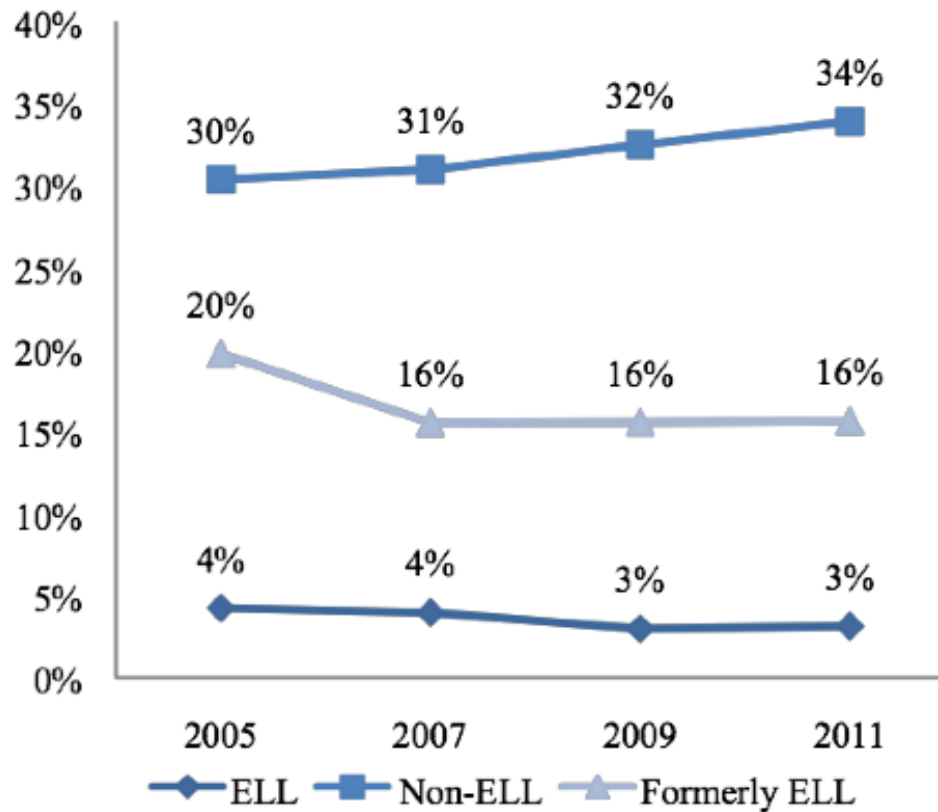
- Majority LI Spanish-speakers
- BUT incredible linguistic diversity



Pittsburgh Study Participants

87 students and 11 languages e.g., Arabic, Burmese French, Karen, Kirudni, Nepali, Uzbek

A Persistent Challenge



Grade 8 NAEP Reading

ELs' Literacy Development

- Word-level skills: ELs on par with native speakers



- Reading comprehension and writing: Large problem space

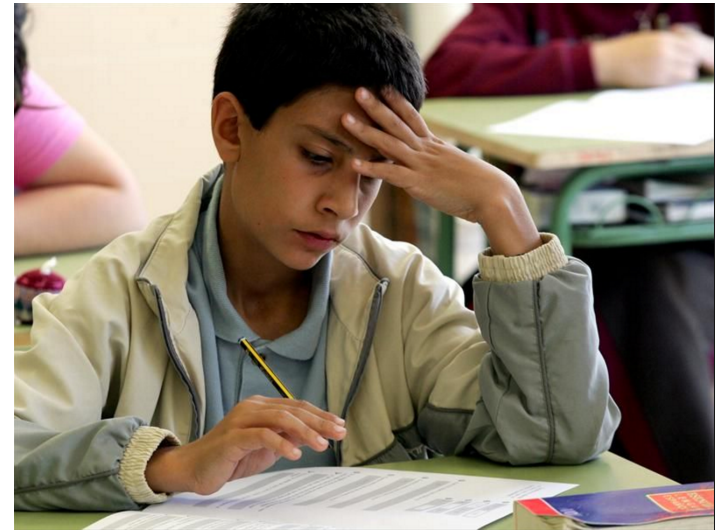
Vocabulary-comprehension Relationship

- Robust, flexible meaning representations are lynchpin of comprehension (Perfetti & Stafura, 2014)



Big Picture: ELs' Vocabulary Knowledge

- ELs tend to know *fewer words* in English and have *fewer semantic connections* between words
- Low vocabulary knowledge-- a profound source of comprehension difficulties



Middle School: A “Discontinuous” Point in Schooling



- Vocabulary demands intensify
- Content area texts loaded with academic words
 - *deviate, sustain, ambiguous*
- Academic words represent abstract meanings and are essential for comprehension

So is vocabulary instruction for ELs typically a focus in MS?

- Lesaux et al. (2015) observed instruction in 28 MS classrooms
- Limited instruction of academic words
 - 8% of time devoted to vocabulary
 - Tended to focus on Tier 3 words
 - Rare words (*gossamer*)
 - Discipline specific words (*protagonist*)



Vocabulary instruction seems to be rare in many middle schools serving ELs

What do we know about effective practices for ELs' vocabulary learning?

- Surge in classroom-based research studies in past decade
 - VIP (Carlo et al.)
 - ALIAS (Lesaux et al.)
 - Word Generation (Snow et al.)
 - QuEST (August et al.)
 - Social studies intervention (Vaughn et al.)

What are the common elements of effective instruction?

- Same principles of vocabulary instruction deemed effective for EOs work for ELs
 - Friendly definitions
 - Multiple and varied encounters
 - Engage students in deep processing of word meanings



So what is the impact of these studies?

- Medium to large treatment effects for word learning of academic vocabulary; some show improved comprehension



- However, they have not accelerated the vocabulary and comprehension development of ELs enough to shrink the gap

Our Approach

English Learners' Robust Academic Vocabulary Encounters



EL RAVE!

Robust academic vocabulary instruction

+

Morphological analysis with cross-linguistic connections

Introduce the Target Word

Innovative

- Friendly definition: Someone or something is innovative when they do things in a new and creative way
- Context #1: Instagram is an *innovative* way to share photos on the web.
- Context #2: Some cities are trying an *innovative* program called “bike share,” where bicycles are available for anyone to borrow for a short time.

Engage Students in Active Processing of Word Meaning

Now let's try using *innovative*. I am going to give you some examples. If you think it is *innovative*, give a thumbs up and say "*innovative!*" If you do not think it's *innovative*, give a thumbs down.

A school bus equipped with WIFI and reclining seats

A school bus with green seats and an emergency door in the back

Getting from your home to school on a solar-powered scooter

Getting from your school back to your house in your mom's car

Why teach morphological analysis?

Decoding (Singson, Mahony, & Mann, 2000) & **Word identification** (McCutchen et al., 2009)

Spelling (Kemp, 2006; Leong, 2000; McCutchen & Stull, 2015).

**Morphological
Awareness**

Vocabulary (Anglin, 1993; Carlisle, 2000; Nagy et al., 2006)

Reading Comprehension (Foorman et al., 2012; Nagy et al., 2003/2006; Wagner et al., 2007)

Teach Morphological Analysis

- Morpheme- smallest meaningful unit in a word
 - Friend**ed** (inflectional)
 - **Un**friend (derivational- prefixes and suffixes)
 - **Girl**friend (compound)
 - **Friended**, **unfriend** (base/stem/rootword)
- And most importantly... Latin roots
 - *Innovative* → *nov* → “new”
 - *novice*, *novelty*, *renovate*
 - Usually “bound” (cannot stand alone)



ACADEMIC
WORDS

Leverage ELs' Linguistic Resources: Connections to Spanish

Academic word: *Innovative*

Latin root: *nov* (new)

Cognate: *Inovador*

“Spanish friend”: *nuevo* (new)

Access to: *renovate, novel, novice*

Cycle 2: Mind Games

RAVE Roots ACE
4.5

RAVE Word	Root	Meaning	Spanish "friend"	Root-related Words
controversy	contro	against	contra	contraband
manipulate	man	hand	mano	manicure
notion	no	Know	se nota	notify
detect	tect	cover	techo	protection
anticipate	anti ante	before	antes	antique
distort	tort	twist	torce	contortionist
valid	val	strong	valor valiente	equivalent
evident	vid vis	see	vista	visor

How do we teach students to use Latin roots to analyze new words?

These friends are *renovating* an apartment by repairing and painting the walls.



- What are these friends doing?
- Circle the root.
- What does it mean?
- How does the root *nov* help us figure out *renovate* means?

Flexibility is key!!!

How do we teach students to use Latin roots to analyze new words?

Overheard Conversations

(A) I am not going swimming at that pool with the novice lifeguard.

(B) When my smart phone malfunctioned, I started to cry!

(C) I like the proximity of my friend's house to my apartment.

(D) I know it's hard to find a summer job, but you have to be tenacious.

(E) Do you think there will be a sequel to the movie, *Piku*?

(F) I simply cannot endure another rainy day.

(G) When I moved from my home country I felt such profound grief.

(H) Clearly, 8th graders should get more privileges than 6th and 7th graders.



Morphological Analysis (MA) Task

Shark meat is a novelty to many people.

- Target word: *novelty* - not taught, unfamiliar
- Target root: *nov* (new) - taught
- Dynamic assessment
 - What is this saying about shark meat? Look at “novelty.” Do you see a word part you recognize? Do you know what the root *nov* means? Does that give you any other ideas about what this is saying about shark meat?

Transcript example

Shark meat is a novelty to many people.

R: What do you think this saying about shark meat?

Ana: The shark is dangerous to many people. It's not normal.

R: If you look at the word, "novelty," do you see a word part you recognize?

Ana: Nov.

R: Yes, do you remember what it means?

Ana: New. Ah! That means the shark meat is new to many people.

Last year's pilot study

- Compared two conditions





**Robust
instruction**
- No roots

EL RAVE
- Roots

Connections to Spanish

- 87 intermediate and advanced ESL students in middle and high school in Pittsburgh

Results show promise!

	Robust Instruction	EL RAVE
Academic word meanings		
Word reading accuracy of academic words		
Morphological analysis of unfamiliar words using Latin roots		

So what?

- ELs are learning general academic words critical to comprehension
- AND they are learning webs of semantically related, high utility words that are connected through Latin roots
- AND they are learning a generative word learning skill: morphological analysis using Latin roots
- We hope this will ACCELERATE ELs' word learning, and ultimately facilitate improved comprehension of a wide range of academic texts



Thank you!

Amy Crosson
Learning Research and Development Center
University of Pittsburgh
(412) 624-7067
acrosson@pitt.edu

We gratefully acknowledge the following institutions for funding:
Learning Research and Development Center, the Spencer Foundation,
and the Institute for Education Sciences.