Why Vocabulary Is More Than Just Single Words and How To Collaborate with Teachers on Instruction

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Overview of Today's Session

1. What does it mean to know a word?

2. What vocabulary do students already know?

3. How to teach vocabulary
   - Federal laws
   - Explicit
   - Systematic
   - Intentional

4. Putting it all together

1. What Does It Mean to Know a Word?

How do you define "vocabulary"?

What is Vocabulary?
Knowing a word includes the ability to…

1. Pronounce the word

   cacophony

2. Understand how the word can be used and how it cannot be used

   ambidextrous – amphibious

3. Spell the word

   their – they're – there

4. Understand the meaning(s)

   for all intents and purposes – for all intensive purposes

5. Grasp the units of meaning within the word

   regardless - irregardless

What is Vocabulary?
Knowing a word includes the ability to…

6. Apply the word in various contexts (denotation)

bat

7. Realize how the meaning may change when morphemes are applied

friend - friends - friendly- befriend

8. Comprehend how meaning may change when paired with other words

lightning – lightning bug

9. Internalize the word's part of speech (e.g., noun, verb, adjective, etc.)

badly cat – bad cat

10. Retrieve synonyms and antonyms for the word (connotation)

young- youthful – childish

2. What Vocabulary Do Students Already Know?

You have to know something to learn something.

Why Vocabulary Lists are Ineffective

- Each class, each school, each student, each year is coming in with different vocabulary and background knowledge.

- Children learn new words by making connections to words and concepts they already know (Moats & Tolman, 2019).

You have to know something to learn something.

Tiers of Vocabulary

- There is not one agreed upon list of vocabulary by age or grade.

- Three Tiers of Vocabulary (Beck, McCowen, & Kucan, 2002) (Section III Vocabulary Support Document)

  - **Tier 1:** Words that are commonly found in spoken language (e.g., dog, train, milk)

  - **Tier 2:** Words that are more frequently found in books (e.g., splendid, detest, absurd)

  - **Tier 3:** Highly specific curricular terms (isthmus, isosceles, hemisphere)

Tier 3

Tier 2

Tier 1
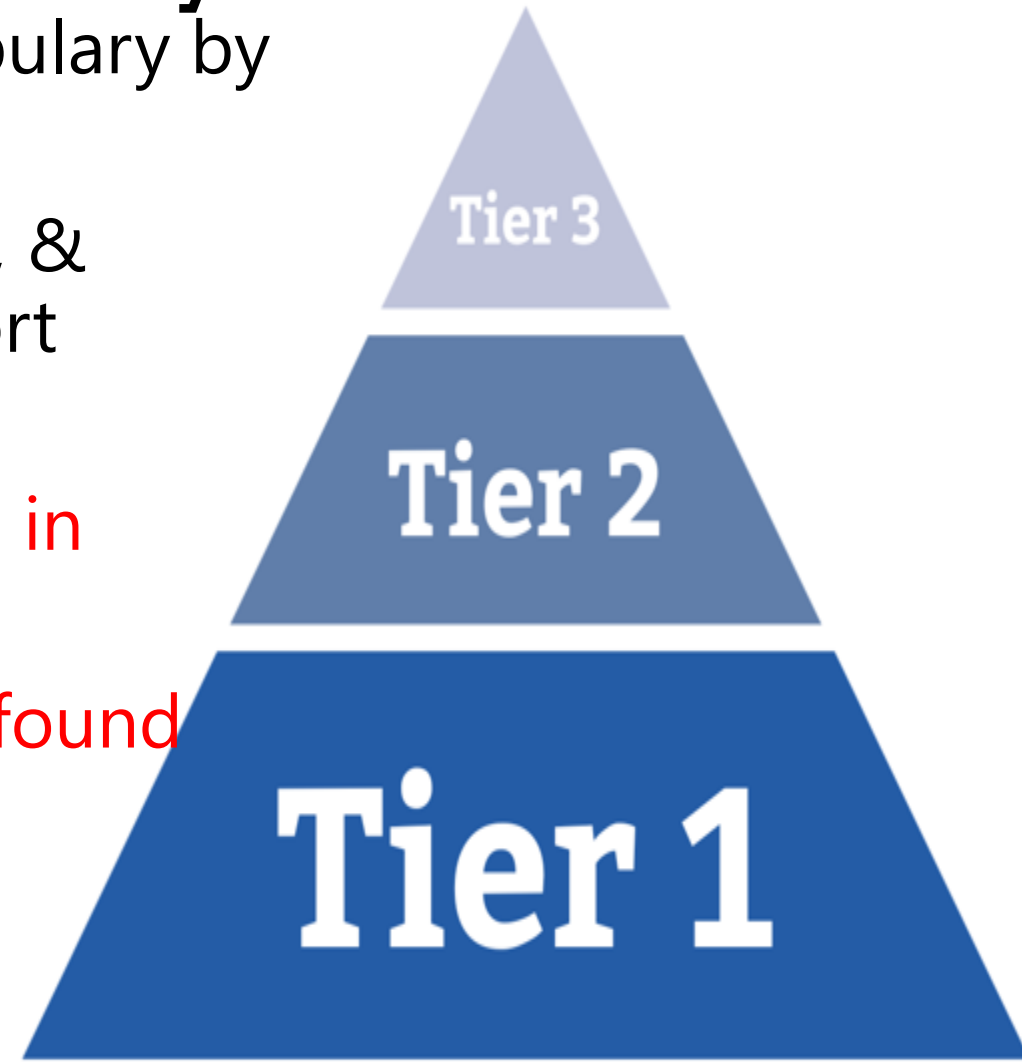
"The cows stopped making milk" vs. "The cows went on **strike**"

"The cows were tired of waiting for electric blankets from the farmer" vs. "The cows were growing **impatient**"

"Duck didn't care either way." vs. "Duck was a **neutral** party"
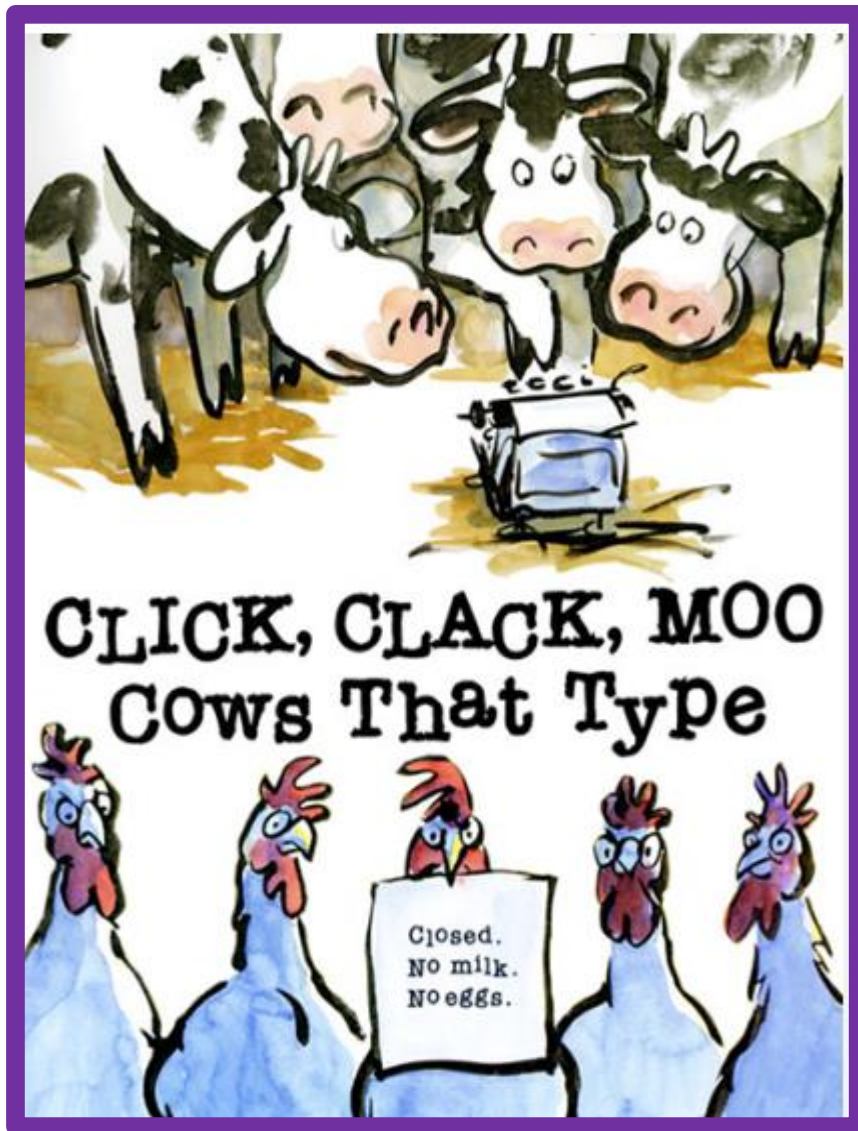
Exposure to Tier Two Words and Background Knowledge

- Picture books have an average of 70% more unique words than conversation (Montag et al., 2015).

- Parents **use words conversationally from the books read** with their child (Deckner, et al., 2006; Dickinson, Griffith, Golinkoff & Hirsh-Pasek, 2012; Fletcher, Cross, Tanney, Schneider & Finch, 2008; Mol, Bus, de Jong & Smeets, 2008; Ninio & Bruner, 1978; Whitehurst et al., 1998).

- Books provide *simulated* experiences (which adds to background knowledge); visiting a jungle, going into outer space, living on a farm, what it is like to experience a snowy day, etc.

Teacher use of sophisticated, academic language (Tier 2 and 3 words) during the school day significantly predicted student's end of year vocabulary achievement accounting for as much as a **one standard deviation increase** (Wanzek, Wood, & Schatschneider, 2023; Gomez & LeSaux, 2012).

A study in the journal *Child Development* found that **preschool teachers' use of sophisticated vocabulary** (Tier 2 and 3 words) **in informal classroom settings** predicted their students' reading comprehension and word knowledge in fourth grade (Dickinson & Porche, 2011).

Say This, Not That: Tier 2 Vocabulary Edition

- I **think** we will have indoor recess because it is going to rain.
- The **smells** coming from the cafeteria are **good**.
- How much do you **think it costs** to go on the field trip?
- Which one would you **change**: pizza or tacos?
- Which lunch would you **get rid of**?
- What **do you do** if you are late to school?
- **Make a** list of your favorite foods.

- I **anticipate** that we will have indoor recess due to **precipitation.**
- The **odors** from the cafeteria are **delicious.**
- What do you **estimate** the cost of the field trip will be?
- Which one would you **alter**: pizza or tacos?
- Which lunch would you **eliminate**?
- What is the **protocol** for being late to school?
- **Compile** a list of favorite foods.

Activity: Sorting Words Into Tiers

Dormant	Ugly	Photosynthesis	Isosceles
Rural	Lanky	Peninsula	Happy
Absurd	Coincidence	Entomologist	Ambulance
Splendid	Baby	Detest	Muttered

Reading and Vocabulary: A Reciprocal Relationship

- When a beginning reader is sounding out an unfamiliar word, they must match the pronunciation of the word they are decoding with a word they have been exposed to through speaking and listening. If the decoded word is recognized as **sounding** familiar the reader is more likely to keep reading. If the word does not sound familiar comprehension is negatively impacted. *

- However, the more a student reads, the more their vocabulary grows. By the end of the elementary school years, the average student will have gained 9,000 root words from text which equates to approximately two new words per day or ten words per week (Beimiller, 2005).

3. How Should Words Be Taught?

Federal Laws

Every Student Succeeds Act (ESSA) 20 U.S.C. § 6301

Comprehensive literacy instruction means age appropriate, **explicit, systematic**, and **intentional** instruction in

- phonological awareness,
- phonics,
- vocabulary.
- language structures,
- fluency, and
- comprehension.

HOW

WHAT

ESSA 20 U.S.C. § 6301 (2015))(F) provides **opportunities for children to use language** with peers **and adults** in order to develop language skills, including **developing vocabulary.**

Individuals with Disabilities Education Act (IDEA)
34 CFR § 300

- The purpose of specially designed instruction via an Individualized Education Program (IEP) provided in the Least Restrictive Environment is to meet the unique needs of a student with a disability, to ensure access to the general education curriculum in order to meet the educational **standards** that apply to all children (34 CFR § 300.39(b)(3)(i) (ii).

3. How Should Words Be Taught?

Explicit Instruction

Explicit and Systematic Instruction

- Fourth-grade students provided with **explicit vocabulary instruction** indicated that the vocabulary instruction had <mark>a positive, significant effect on not only vocabulary skills but also students' reading comprehension</mark> (Beck, Perfetti, and McKeown, 1982; Cirino, Pollard-Durodola, Foorman, Carlson, & Francis, 2007; Zipke, Ehri, & Cairns, 2009).

- Students must understand <mark>90-95%</mark> of the words on a page to understand the content (Nagy & J. Scott, 2000). The other 5% of word meanings can then likely be inferred from context.

When was the last time you read something where you weren't familiar with 90% of the words?

Activity: 75% of Words Known

_____ is marking a _____ on a measuring _____. This involves ____ the relationship between _____ of a measuring _____ and _____ or _____ _____, which must be _____. For example, placing a _____ in melting ice to see whether it reads zero, to check it has been _____ correctly.

Explicit Vocabulary Instruction

- Explicitly <mark>pre-teach</mark> vocabulary prior to beginning content instruction.

- Why?
  - Research has found pre-teaching to be useful for learners from elementary (Neuman, 1988) to high school levels (Hawkins, Hale, Sheeley, & Ling, 2011).

  - Pre-teaching vocabulary frees up working memory so that comprehension is more easily achieved.

  - Students are more able to apply additional reading skills such as <mark>inference</mark>, prediction, comparing, and making connections <mark>while reading,</mark> as well as filtering what information is important from details that are not important.

Explicit Vocabulary Instruction

- Words should not be taught as "lists", but rather how the words relate to the content and to each other because instruction without context has usually been found to be ineffective (Roseberry-McKibbin, 2013).

- **There is no research that indicates a positive effect from looking up words in a traditional dictionary.**

- Definitions are written to be as short and concise as possible. For example, the word "set" has 67 different definitions (e.g., "set apart" vs. "set aside" vs. "set foot in" vs. "set sail" vs. "set upon"

Ambiguous- *adj.*

1. Liable to more than one interpretation.

2. Uncertain or indefinite.

How likely is it that students know...
"liable, interpretation, uncertain, indefinite"

How Do I Choose Words for Explicit Instruction?

Guiding questions to determine which vocabulary words are critical to comprehension of the text:

- What words are your students most likely to be unfamiliar with?

- Which words are of critical importance to comprehend the text?

- How frequently do students encounter this word?

- How does the word relate to words they may already know?

- What does the word contribute to the comprehension of the text?

- How can these words be grouped together or grouped in like categories of conceptual understanding in order to make connections between the words?

Instructional Routine for Vocabulary

Review the text for words students are likely unfamiliar with and **pre-teach** them by….

1. Say the new word, have students **repeat it after you** *(phonology)*.
2. **Segment** the word by syllables (do NOT clap) *(phonology)*.
3. **Write the word** and discuss the number of syllables, the number of sounds, unique phonic patterns, and morphemes *(phonics and morphology)*.
4. Talk about what the word means **using a student friendly definition**. Add visual supports and experiences with the word to add to *background knowledge*.

5. If the word is a noun, talk about visual characteristics, function, location and various parts of the named item to **develop *mental imagery skills***.

6. Talk about other **words that may be connected to that word** (synonyms, other words in the same category, contexts the word is typically used, etc.).

7. **Ask questions about the meaning** of the word that can answered with a "yes" or "no" (i.e., Can a valet clean your teeth? Can a valet park your car?) *(stages of word knowledge)*.

8. **Frequently use the new word** *(multiple exposures)*.

3. How Should Words Be Taught?

Systematic Instruction

Systematic Instruction

Connect new words (Tier 2 or Tier 3 words) to Tier 1 words.

- Synonyms

  nice - good – pleasant – kind – polite – considerate – friendly

- Antonyms (nice)

  mean – bad – unkind – unpleasant – uncaring – inconsiderate

- Other words in the same category (character traits)

  brave – loyal – resourceful – generous – brilliant – mischievous

- Contexts the word is typically used (character traits)

  Character traits give more information and paint a clearer picture to better understand a character's motivations and actions.

Systematically Build the Four Stages of Word Knowledge

1 have never seen or heard this word.

2 have heard this word, but I am not sure what it means.

3 think this word has something to do with...

4 know this word and can use it.

Students with more words in their vocabulary at a level 3 and 4 will demonstrate better reading comprehension and use of context clues when new words are encountered (National Reading Panel, 2000).

3. How Should Words Be Taught?

Intentional Instruction

Intentional Instruction
Makes Connections With…
Phonological Awareness,
Morphology,
Phonics,
Syntax,
and Mental Imagery.

Multiple Meaning Words and Figurative Language

Green = color

Green **thumb** = Good at gardening

Weather = the atmosphere at a place and time with regard to heat, sun, wind, rain, etc.

Under the weather = feeling sick

Raining = form of precipitation

Raining **Cats and Dogs** = very heavy rain

Skeleton = rigid supportive or protective structure or framework of an organism

Skeleton **in the closet** = hiding something

Vocabulary and Phonological Awareness

Habit – Habitat

People – Pupa

Specific – Pacific

Advise – Advice

Affect - Effect

Without awareness of how words **sound** different, it will be a struggle to understand how the **meaning** is different.

Phonological awareness is what allows us to compare words we **know** with words we **don't know yet**.

Written words are put into long-term memory by anchoring to their **sounds,** not their meaning.

Suspicious

Convalesce

Vocabulary and Morphology

- Approximately **80 percent of English words contain multiple morphemes** (Anglin, 1993; Hiebert, Goodwin, & Cervetti, 2018) and morphologically complex words represent **the bulk of unfamiliar words that children encounter in text** (White, Power, & White, 1989).

- The English language is a morphophonemic language (which is different from Chinese, Sign Language, etc.)

    /f/ /r/ /o/ /g/ - frog, frogs, froggy, frogger
      phonemes   -   morphemes

The Overlap of Morphology with Phonics

Morphology is part of writing as well as **phonics** because adding morphemes can change the spelling of a word.

run-running *(doubling pattern)*

invade-invading *(drop the e or not)*

snag-snagged *(doubling pattern)*

fry-fried *(change y to i)*

- **ELA.C.4:** Demonstrate command of standard English grammar and conventions when writing including...
  - **Inflectional** morphemes, **Derivational** morphemes,
  - **Greek and Latin Roots, Etymology**

Inflectional Morphemes	Derivational Morphemes

• Inflectional suffixes cannot change the part of speech of the word that they are added to
 	
• Examples of inflectional morphemes are
   • Plural –s
   • Past tense –ed
   • Present progressive –ing
   • Comparative markers – er, -est
	• Derivational suffixes can change the part of speech of the word that they are added to
	
	• Examples of derivational morphemes
	   – From a verb to a noun/
	      • encourage & ment = encouragement
	   – From a verb to an adjective/
	      • select & ive = selective
	   – From an adjective to a verb/
	      • general & ize = generalize
	   – From an adjective to an adverb
	      • beautiful & ly = beautifully

Greek and Latin Roots	**Etymology**
• When we teach Greek and Latin Roots, we teach meaning.	• When we teach etymology, we are teaching the stories behind the words which helps to make sense of the word and its spelling (e.g., mortgage).
• Greek and Latin roots help students connect new and unfamiliar words to words that they know and understand.	
• "mal" means "bad"	• Why does "ch" sometimes sound like /sh/?
• How many words can you think of that include "mal"?	• How many words can you think of where "ch" makes the /sh/ sound?
• How does knowing "mal" help to explain the meaning of those words?	

Greek and Latin Roots

- Teaching students to recognize and analyze word parts such as roots, prefixes, and suffixes (morphemic analysis) can support to expand their knowledge and understanding of known **and unknown words** (Baumann, Edwards, Font, Tereshinski, Kame'enui, & Olejnik, 2002).

- Modeling word analysis helps students to begin to independently build and expand their vocabularies (Anderson & Freebody, 1981).

- **Over half of all English words are derived from Latin and Greek roots** (Rasinski, Padak, Newton, & Newton, 2008).

English syntax is very rule governed including order of adjectives.

1. Quantity or number
2. Quality or opinion
3. Size
4. Age
5. Shape
6. Color
7. Proper adjective (often nationality, other place of origin, or material)
8. Purpose or qualifier

one
refreshingly
large
fresh
scoop (of)
blue
cotton candy
ice cream

Vocabulary and Syntax

- One of the most well-established findings in educational research is that reading comprehension and vocabulary knowledge are highly correlated with one another, and that <mark>knowledge of **individual** word meanings **only accounts for 50-60% of the variance** in reading comprehension</mark> (Adlof & Perfetti, 2014, Stahl & Nagy, 2006).

  Vocabulary is not just knowledge of single words, but the …

  relationship between words and

  how words combine to create mental images.

The Secret Language of Story

- In the light of the moon, a little egg lay on a leaf (Carle, 1969).

- Knowledge of **language structure** (morphology and syntax) enables children to **cluster words into meaningful units and phrases** (Carlisle & Rice, 2002).

- **Good readers make meaning by reading in phrases; struggling readers limit meaning by reading word by word** (Rasinski, Ellery, & Oczucks, 2015).

Activity: Syntax

Last Serney, Flingledope and Pribin were in the Nerd-link treppering gloopy capels and cleaming burly greps. Suddenly a dittzy strezzle boofed into Flingledope's tresk. Pribin glaped and glaped. "Oh, Flingledope." he chifed. "that dittzy strezzle is tunsing in your grep!"

(LaVoie, 1989)

Vocabulary and Mental Imagery

- **Mental imagery or mental representation is defined as what an individual can feel, hear, see or taste in one's own mind even** though the stimulus which creates the image is not actually seen, heard, felt, tasted, or smelled (Fennema, 1959; Richardson, 1969; Coon and Mitterer, 2011).

- Mental imagery training have been found to be beneficial for both listening comprehension and reading comprehension (Canter, Freeman, Robertson & Outhred, 1999; Johnson-Glenberg, 2000; Oakhill & Patel, 1991).

Activity: Mental Imagery

The procedure is quite simple.

First you arrange things into different groups.

Of course, one pile may be sufficient, depending on how much there is to do. If you must go somewhere else due to lack of facilities, that is the next step. Otherwise, you are all set. It is important not to overdo things – that is, it is better to do too few things at once than too many. In the short run, this might not seem important, but complications can easily arise. A mistake can be expensive as well. After the procedure is completed, one arranges the materials into different groups again. Then, they can be put into their appropriate places. Eventually they'll be used once more and the whole cycle will have to be repeated. However, that is a part of life.

Building and Scaffolding Mental Imagery

1. What is the category, location, background, or context?

2. What does it do? What did it/the person do? What is its purpose or function?

3. What does it look like? What is the reason? What do you infer?

4. What is it made out of? What are its personality or emotional characteristics?

5. What are the various parts or sequence of events?

6. What additional background knowledge is important?

Move from word imagery to sentence imagery to paragraph imagery, etc.

Scooping and Mental Imagery

Fern pushed the chair out of the way and ran outdoors.

The grass was wet and smelled of springtime.

Fern's sneakers were sopping by the time she caught up to her father.

4. Putting It All Together

What Can I Do Tomorrow With This Information?

The Declaration of Independence

"But when a long train of abuses and usurpations, pursuing invariably the same Object evinces a design to reduce them under absolute Despotism, it is their right, it is their duty, to throw off such Government, and to provide new Guards for their future security."

Which words/phrases would your students struggle with?

What is the percentage of words known?

Which words would be Tier 2? Which words would be Tier 3?

What background knowledge is important for this passage?

"But when a long train of abuses and usurpations,

 pursuing invariably the same Object

evinces a design to reduce them under absolute Despotism,

it is their right, it is their duty, to throw off such Government,

and to provide new Guards for their future security."

Question and Answer

Thank you for your time, attention, attendance, and for what you do for children every day!

If you'd like more information, please do not hesitate to reach out!

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Abbreviated list of references is available in separate Word document.