

TEACHER TALK: THE ORAL AND TEXT-BASED VOCABULARY USED BY KINDERGARTEN TEACHERS

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Why Study Vocabulary Use in Kindergarten?

Most children in the U.S. attend kindergarten. It is the primary point where most children begin academic instruction. Research has shown that a vocabulary depth and breadth is predictive of reading ability. In fact, vocabulary assessed in grade 1 predicts more than 30% of grade 11 reading comprehension (Cunningham & Stanovich, 1997).

Exploring the vocabulary exposure and instruction associated with kindergarten attendance will provide useful information to future educators who want to accelerate vocabulary development.

Learning New Words

Young children acquire word meanings through exposure to the vocabulary used by adults during conversations and shared book reading. Their knowledge of vocabulary, particularly 'academic' or sophisticated words is fundamental to school success. The acquisition of these words relies upon the vocabulary they are exposed to, and have explained, in their home environment and early school settings.

How Many Words?

In order to provide children in kindergarten with the vocabulary they need, it is suggested that they learn:

- -2 words per week as a realistic goal, an ambitious goal is 3 words per week (Fuchs et al, 1993).
- - an average of 400 per year (Beck et al, 2002).
- - an average of about 1000 per year so 400 are retained (Biemiller & Boote, 2006).

How Many Exposures?

The number of exposures needed to learn a new word will depend upon a variety of factors including the salience of the word or the situation in which the word is learned, it's relationship to known words, the pronunciation of the word, or whether the word is concrete or abstract. Density of exposure to novel vocabulary is associated with vocabulary acquisition (Hoff, 2003; Huttenlocher et al, 1991; Pan et al, 2005)

Single exposures might be fast-mapped but deeper understanding requires repeated exposures. The average young learner requires around 35 exposures to acquire the full meaning of a word, children who have robust vocabularies may require only 20 exposures and children with language deficits may require up to 55 exposures (Blachowicz and Fisher, 1996, in Montgomery, 2012). Snow, 2010, suggests 15-20 exposures.

What Words to Teach

Words by Age of Acquisition (Biemiller, 2006)

Tier 2 Words (Likely to occur in texts, the idea may be represented in vocabulary by a simpler word e.g., benevolent vs. kind) (Beck et al, 2002)

Sophisticated Words (Words not found in the Dale-Chall word list) (Weizman & Snow, 2001)

Words needed based on frequency of use in texts (Hiebert et al, 2017)

Vocabulary Research in Kindergartens

In a study by Wright & Neuman, 2014, it was found that vocabulary instruction was generally seen in the form of single, brief word explanations reflecting 'teachable moments' rather than planned lessons (e.g., "It's on the cover. The cover is the front"). The words taught tended to be easy rather than sophisticated. This study examined only teaching episodes and did not code for vocabulary use in the classroom.

Purpose of this Investigation

This study is designed to extend the research conducted by Wright & Neuman to:

1. Evaluate the sophistication of the words and types of vocabulary used by kindergarten teachers throughout the day.
2. Provide information to educators regarding practice patterns and the potential for improvements to practice.

Study Participants

Four kindergarten teachers who work in private kindergartens in the U.S. mid-south and are nearing the end of the academic year.

Their students appear to be a homogeneous group with no students noted with special needs.

Human subjects permission was granted to record the teachers. We delete or de-identify any material that would allow a child to be recognised.

Study Methods

- Teachers agreed to wear a recording device for a full week of instruction. They were asked to remove the recorder in the event of private conversations or when speaking when no children were present.
- The recordings were transcribed, checked for reliability, and coded for analysis using the Systematic Analysis of Language Transcripts (SALT, Miller & Nockerts) computer programme. The transcripts averaged over 25 hours of instruction per teacher.
- Analyses were conducted to determine the types of words used by teachers across a week, assessed as common words (CW) of varying difficulty or unique words (UW).
- Analyses are being conducted to determine how vocabulary was taught during the week.

Vocabulary Databases

1. **Dale-Chall** (Chall & Dale, 1995). The Dale-Chall word list is made up of 3000 words. 2850 were used in this analysis. Previous studies (Wright & Neuman, 2014; Weizman & Snow, 2001) have used the Dale-Chall word list to count the number of simple or Tier 1 words in a sample. The decision to eliminate some of the words in this study was based on their perceived sophistication. For example, schoolmaster, thy, milkman, morrow.

Vocabulary Databases

2. **WordZones™ for 4,000 Simple Word Families** (Hiebert, 2005, based on Zeno et al., 1995). The WordZones™ list is comprised of 5,586 words, representing the most common words and frequently used simple affixes based on an analysis of 17.25 million words found in texts across grades 1 – College. Research has demonstrated that over half of the morphological families in the WordZone list (53%) appear in texts in the K-1 level and 85% appear by the end of elementary school. In grades K-1, less than 5% of unique words found in texts are not within the core and typically include familiar words like ham. Example, green eggs and *ham*.

The words are numbered according to their frequency of use in texts and coded accordingly.

- WZ1 = 310 most frequent words
- WZ2 = 311 – 930 most frequent words
- WZ3 = 931 – 2,606 most frequent words
- WZ4 = 2607 – 5,586 most frequent words

Vocabulary Databases

3. Additions to the DC and WZ wordlists included additional plurals, comparatives or other simple affixes (e.g., acorns, carrots, drowned, popped, sadness, sharper) for coding into SALT (based on research that shows semantic variations of root words may be understood if the root word is known (Anglin, 1993). These were coded Coded 5 and 6

When combined, the total number of words in the database = 7449.

Word Scoring

- CW0 = DC ex: ache
- CW1 = DC/WZ 1 or WZ 1 ex: a
- CW2 = DC/WZ 2 or WZ 2 ex: above
- CW3 = DC/WZ 3 or WZ 3 ex: accurate
- CW4 = DC/WZ 4 or WZ 4 ex. accordingly
- CW5 = X elaboration of a word with a WZ or DC base 0-3 (ex: accepts)
- CW6 = X elaboration of a DC or WZ base 4 (e.g., absorbs)
- UW= Unique word not found in the database

Sample CW Analysis by Word Order

	DC/WZ	1	351	173	346	245	511	1626
ABILITY	WZ	3						
ABLE	DC/WZ	1	14	4	3	2	6	29
ABOUT	DC/WZ	1	126	35	79	56	128	424
ABOVE	DC/WZ	2				2		2
ACCEPT	DC/WZ	3						
ACCEPTED	WZ	3						
ACCIDENT	DC/WZ	3	1					1
ACCORDING	WZ	2						
ACCURANT	DC/WZ	3						
ACCURATE	WZ	3						
ACBIE	DC	0						

Total Common Words Per Week

Teacher 1 – 51,155
 Teacher 2 – 45,883
 Teacher 3 – 85,448
 Teacher 4 – 57,691

Average – 60,044 common words per week.

Sample of Common Word Categories Teacher 1

- 0 = 328 productions of 794 possible words
 - 1 = 32,900 productions of 309 possible words (64%)
 - 2 = 7807 productions of 613 possible words
 - 3 = 5551 productions of 1605 possible words
 - 4 = 4420 productions of 2795 possible words
 - 5 = 90 productions of 708 possible words
 - 6 = 59 productions of 621 possible words
- Total out of 51,155 CW

Calculating Unique Words (UW)

Unique words are all words that did not appear in the Common Word Database, to determine UW:

- Deleted Proper Names
- Deleted Letter names
- Deleted Numbers
- Deleted Misspelled Words
- Deleted Fillers - eh, ah, um
- Deleted Contractions (can't) and Reductions (gonna, wanna)
- Deleted Words that differed from Common Words 0-3 due to a single affix change (e.g., plural, -ly).

Unique Words per Day – Teacher 1

- Day 1 = 44 unique words/ 104 unique word productions
- Day 2 = 35 unique words/ 101 unique word productions
- Day 3 = 40 unique words/ 170 unique word productions
- Day 4 = 52 unique words/ 110 unique word productions
- Day 5 = 21 unique words/ 85 unique word productions

Unique Words – Day 1, Teacher 1

ABBREVIATE	3	MENOW	3
ABBREVIATED	2	NOPE	2
ACROBATIC	3	ONFELY	1
BLURRY	2	REPTILE	3
BUDGY	2	REPTILES	6
BULLETIN	6	SCOOT	6
CeleBRATING	1	SHIMMICK	1
CHAPEL	4	SNACK	2
CHIEF	1	TRIPPLE	2
CRAYON	6	TALLY	1
CRAWL	1	TEND	1
CRAYONS	2	HASTILY	1
CLUBBY	3	TUMMILY	4
ESTIMATION	2	VEROD	1
FELT	2	WHISPER	1
FATTEN	1	WINKLE	1
FOCUSING	1	YADISTICK	1
FOGGLY	2	YUCKY	1
HAMSTER	2		
HOPEFULLY	1		
UNSTABLE	4		
LENT	1		
LEAFY	1		
MARX GRAS	1		
		Total = 95	

Vocabulary Instruction – Teacher 1

T Okay, so let's look at our **data (CW)**.

T Data is information that we have collected. (Definition)

**

T Remember **most (CW)** is the biggest number, **K?** (Synonym)

**

T **Reptile (LW)**.

T A reptile can be more than just a lizard, but I just got a picture of a lizard up there.

T Yeah it could be a snake. (Descriptive)

**

T We could put a slash there, or a **diagonal (LW)** mark. (Synonym)

**

T January, February, March, and April, May, June, July, and August, September, October, November, and December.

T Those are the **months (CW)** of the year. (Descriptive list)

T Let's try it again and see if everyone can participate.

T January, February, March, and April, May, June, July, and August, September, October, November, and December. (Repetition)

Missed Opportunities – Teacher 1

T I am taking the letters off of your cards because what I said was you that could make the word **sap**.

T So I want you to focus on this card.

T How could, What letters would you need to make the word **sap**?

T **Sap**.

T You are going to make the word **sap**.

T How could you make the word **sap**?

T Nope.

T Because when you had the rest of them you were putting them on and building on them instead of making words.

T So close.

T That says **asp**.

T I will give them back, but after you make the word **sap**.

T That word is going to be.

T No that says **asp**.

T You want it to be **sap**.

T So move the s to the, move the s to the first spot.

T There you go.

T Now **sap**.

T Good!

Unique Words – Teacher 3 (Day 1)

ABANDON (4)	ANCES	LAB	SUBSIDED
ADORE	IGHT	LOBBY	SKETCH
AGENDA	POSE (3)	MALIBU	SNACK
AGITATED	EGOCENTRIC	MATHEMATICALLY	SPECIFIED (12)
ALYSSUM (4)	EMBARRASSED	MENUS	SPIC (1)
BELLOWS	EMBARRASSING	MULTIVITAMIN	SOCIAL
BENEFITED	ENIGMA	NOPE (4)	SUPER (7)
BLIND	ENVY	OFFICIAL	SWAP
BOT	FRASNO	PLATES (2)	TARE
BULKY	EXTERMINATOR	PANDERONUM (1)	TIED
BUMPER	FANCIATED	PERSONALITY	TEMPLE
BUMBER (4)	FLATTERED	PIZZA (2)	TRASHGIBBERLY
BURROW	FLAVOR	PROFBREAD	TRIPPE
CADY	FLIE (3)	PROGRAMING	USER
CRABS	FLUTTERED	PUNCTUATION	UNCERTAINTY
CLONES	FRAGRANCE	QUADRUPLE (3)	VEGBO
CONCOR (2)	FRESTRATED (2)	RELEVANT	VOWEL
CONCORD (2)	GRANDLY	RIPE	VAPPELS (4)
CONSONANT (2)	GRAPING	SALSA (2)	WEBSITE (3)
CONSTRUCTED	HAMPER	SALVE (6)	WEIRD (6)
CONSONANTS (3)	IBRO	SCOOT	WEIRDY (2)
CROPPER	IBROLED (2)	SCORING	WHIRLY (3)
CROSSWORD (4)	INTEREPT	SCROUNGING	WOODWORK
CLUB (1)	IS (1)	SCUBED	WRENSHIP (2)
CLUB (1)	IBROED	SCUBED	WOW

Vocabulary Instruction – Teacher 3

(Only instruction from 84 pages of Day 1 transcript, 2181 lines of text)

T Chapter eight is called A Family Reunion.

T Reunion's like when everybody gets together like a family reunion is when like a lot of the people in your family all get together and hang out, sometimes have a party, kind a thing.

**

T And it says most of Egypt is desert.

T The desert is very hot during the day.

T The desert is very cold at night. (Description)

Results to Date

- The results confirm the Wright & Neuman (2014) findings that vocabulary lessons are not structured during the day.
- The results show that although teachers may provide exposure to sophisticated words in context, little rich vocabulary instruction is involved.
- The results show that instruction would benefit from the use of more sophisticated words, along with a more focused approach to vocabulary selection.

Recommendations

- Provide instruction to pre-service teachers regarding the selection of vocabulary targets and the use of rich vocabulary instruction in classrooms.
- Provide in-service presentations to encourage greater attention to sophisticated vocabulary use and instruction in classrooms.