

Analysis of Morphological Complexity in Teachers Instructional Dialogue



Alejandro Acosta, Audrey Hendrix, Dr. Sana Tibi, Dr. Carla Wood CCC-SLP

Florida State University, School of Communication Science and Disorders

Introduction

- Morphemes play a crucial role in learning and using academic language.
- **Morphology** is defined as “the study of units that contain a meaning that may be added to words”(Carlisle, 2003).
- Two categories of morphemes: derivational (prefixes and suffixes) and inflectional.
- **Derivations** typically alter the meaning of the word they are being added to and change the grammatical class of words.
- **Inflections** affect the grammatical format of the words they are attached to but never change their grammatical category.
- **Morphemes** are meaningful units of a language that cannot be separated any further.
- While **morphological awareness** (or knowledge of how morphemes change language) is crucial in learning vocabulary and how to read, there is a lack of research on the morphological complexity of teachers' language input in the classroom.
- This study seeks to describe the **morphological complexity of teacher's instructional dialogues** to describe how much exposure students have to derivational morphemes in the classroom.

Research Questions

1. What types and frequencies of derivational morphemes occur in teachers' instructional dialogues?
2. Do morpheme types and frequencies differ by instructional subject?

Methods

- Study sample ~ 1500 fifteen-minute transcripts of 40 2nd-grade teachers' instructional dialogues.
- An online affix profiler called **Morpholex** (Laufer & Cobb, 2020; Cobb, 2024) was used to evaluate these transcripts for morphological complexity.
- Morpholex classifies morphemes based on the degrees of morphological complexity established by Bauer & Nation (1993).
- Data from Morpholex was used to compare morphological complexity between four subjects: English language arts, math, social science, and science.

Results

Figure 1
Average Base Word and Morpheme Frequencies

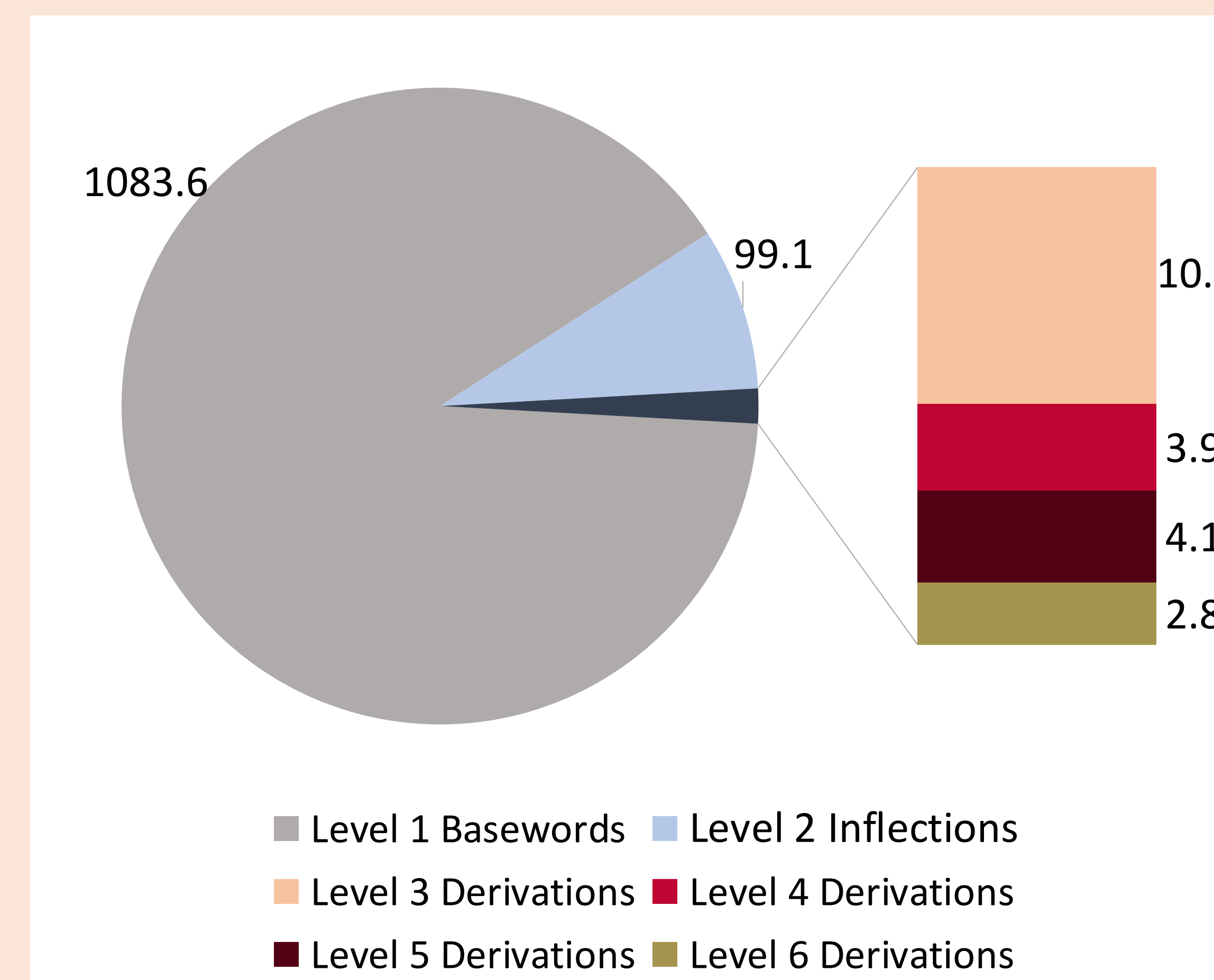
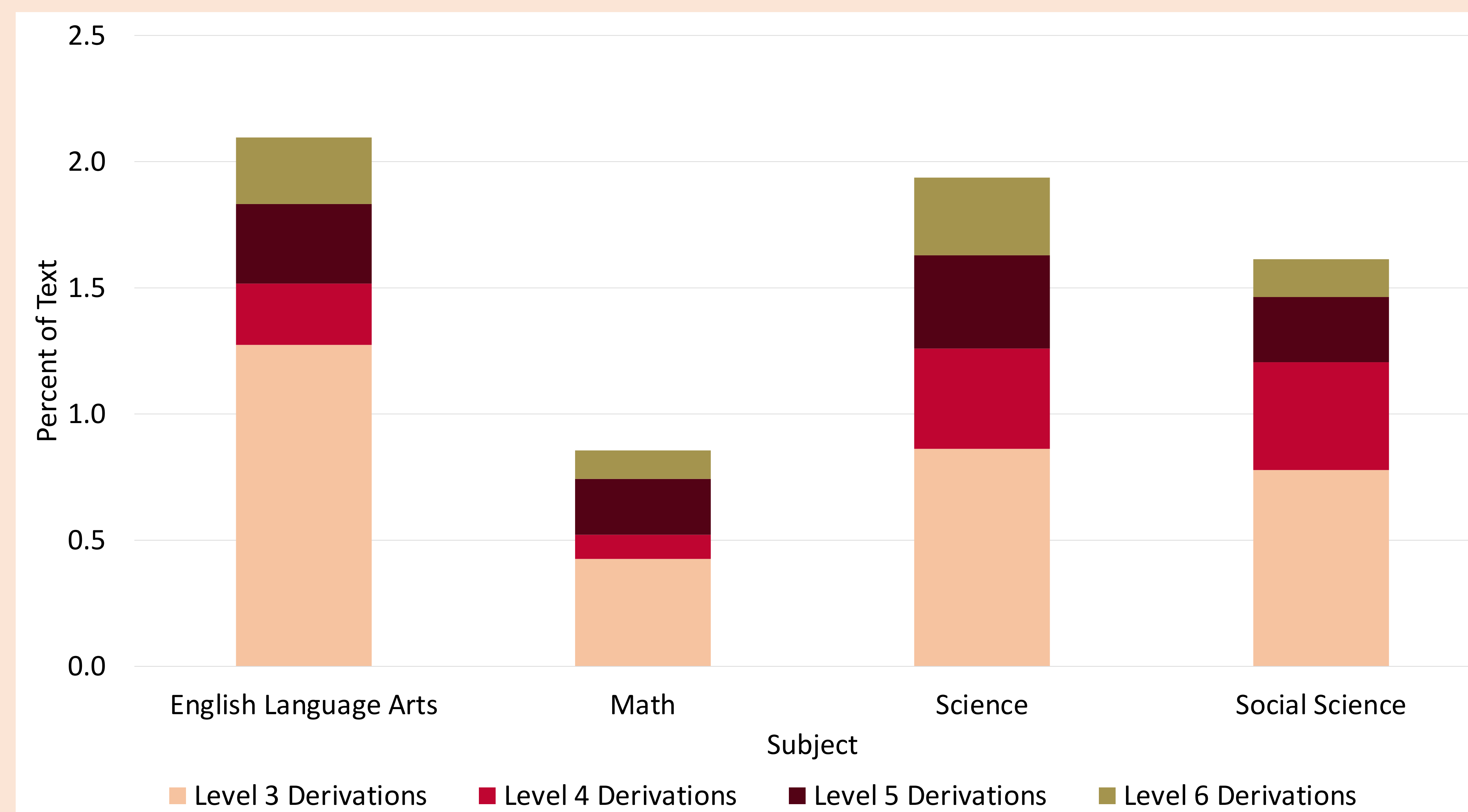


Figure 2
Proportions of Derivational Morphemes by Subject



Results

- Preliminary results showed low frequencies of derivational morphemes across all subjects.
- Within the subsample base words and inflections are the most common.
- All morpheme types and frequencies are more frequent than math.
- While frequencies of all derivational morphemes are low, **Level 3** derivations are more frequent across all subjects.
- Derivational morphemes are distributed with two different patterns across subjects. In Science and Social Sciences, the frequency of derivations decreases as the Level increases. However, in Math and English Language Arts, there are more Level 5 derivations than derivations from Levels 4 or 6.

Discussion

- Students are not exposed to high numbers of derivational morphemes.
- This may be detrimental to students who are struggling to read and cannot gain additional exposure through print.
- **Lower exposure** to morphemes may lead to a **less complex vocabulary and poorer comprehension.**
- Teachers across instructional subjects may be able to increase students' understanding of derivational morphemes by providing morphological instruction.

References

