

A Critique for “Breaking Down Words to Build Meaning: Morphology, Vocabulary, and Reading Comprehension in the Urban Classroom”

Introduction

“Breaking Down Words to Build Meaning: Morphology, Vocabulary, and Reading Comprehension in the Urban Classroom” is an linguistic article written by Michael J. Nonie Kieffer and K. Lesaux in 2007. In this article, they tried to describe how important the word-attack strategies were in reading comprehension. And the word-attack strategy was related to morphology. They used “morphology” and “breaking down words” interchangeably. After examing some previous reading researches, they concluded that vocabulary and reading comprehension have a reciprocal relationship—as greater vocabulary leads to greater comprehension, better comprehension also leads to learning more vocabulary words (Stanovich, 1986)—and this relationship has major implications for the teaching of reading (Rupley, Logan, & Nichols, 1998/1999). Current studies suggest that a similar reciprocal relationship between reading and vocabulary exists for ELLs (García, 1991; Proctor, August, Carlo, & Snow, 2005). Considering the “fourth-grade slump” which refers to many four-grade students struggled to comprehend academic contents texts due to the lack of academic English vocabulary, they wanted to find an appropriate way to expand students’ academic vacabulary. According to them, although not all word learning strategies function equally for everyone, but they thought morphology is the best answer. Based on a series of tests with 111 students, they had two major findings that morphology was beneficial for students’ development of vocabulary and reading comprehension. Finally, in order to broaden students’ vocabulary and reading comprehension, they put forward four principles which could be applied to morphology teaching.

The Theoretical Considerations in This Article

In order to justify the intrinsic connection between vocabulary, comprehension and morphology, Michael Kieffer and Nonie Lesaux stated with a phenomenon called “fourth-grade slumps” which was proposed by Jeanne Chall, a reading researcher in 1983. Although it is not entirely clear what causes this “fourth-grade slump” or what factors put urban students at greater risk for these difficulties, there is a general consensus among researchers that vocabulary (Freebody & Anderson, 1983; RAND Reading Study Group, 2002), increasing word length and complexity (Juel, 1988), and differences in exposure to print each play a role (Cunningham & Stanovich, 1991). Based on their own reasearch and teaching expeirence in urban schools, Kieffer and Lesaux agreed that the academic vocabulary determined stuent’s performance in academic text study. After idetifying the importance of academic vocabulary, they tried to discover a good way to learn it. They hypothesized the ability to use morphology to break down unkown words is the most efficient way to promote reading comprehension.

Methodology Used in This Article

To check this hypothesis, they conducted some tests with 111 students (87 Spanish-speaking ELLs and 24 native English speakers) who came from vast urban district in southern California in both fourth and fifth grade, to test their ability to break down words into meaningful parts and those words were a reflection of their vocabulary knowledge and reading comprehension in fourth and fifth grade. This ability, obviously, is based on morphology, to be specific, the knowledge of morpheme. So they tested the function of morphology on the aspect of enriching students' academic words and promoting their reading comprehension. Morphology refers to the study of the structure of words, particularly the smallest units of meaning in words, that is morpheme. The two researchers adopted four different measures to test students' understanding of morphology, reading comprehension, word reading fluency and vocabulary respectively. As for the understanding of morphology, students were required to finish a sentence with a root word extracted from a complex word. For example students needed to separate "popular" from "popularity" and then used the former to fill the blank of the sentence "The girl wanted to be very _____". Regarding the reading comprehension, they evaluated it with the Woodcock Language Proficiency Battery—Revised, Passage Comprehension subtest, which is a cloze test in which students provide a word to complete a passage; and the Gates-MacGinitie Reading Comprehension Test (1989), which is a traditional multiple-choice test. They chose to assess students' word reading fluency with the Test of Oral Word Reading Efficiency, Sight Word Efficiency subtest (1999), which is a timed test in which students read as many words of increasing difficulty as they can in 45 seconds. Finally, vocabulary was measured by the Peabody Picture Vocabulary Test (3rd edition), which is a multiple-choice measure of receptive vocabulary knowledge in which students hear a word and choose an appropriate picture. All the four measures belonged to quantitative method. Besides, they did not mention the sequence of the various tests. Considering students' understanding of morphology, reading comprehension, word reading fluency and vocabulary, which one should be investigated first and will the testing order influence the result?

In my opinion, conducting investigation with quantitative methods is not reliable enough. I think those measures could be combined with some qualitative methods, such as having an interview with students. Because students in fourth and fifth grade may not be emotionally mature enough to deal with those tests seriously. Some may feel nervous or even anxious about paper exams or some testing forms, like Sight Word Efficiency subtest, would be stressful for them, thus the results of the test would not truly reflect students' understanding of morphology and vocabulary level. Besides, they just assumed the English language learners whose mother language was Spanish, were bilingual and ignored the possibility that they may be multilingual. If a student, besides English, knows both Spanish and French, would it influence the result?

Results and Relevance to Theory

As for the data collection, it is the biggest weakness of the article because few of the data information was mentioned. Michael Kieffer and Nonie Lesaux just posted

their two findings directly. As a reader, I could not know the exact results of students's performance, let alone judge whether their findings are reasonable or not. The only information about their investigation I could find is a table named "Table 1 Items on Fourth-Grade Morphology Test in Order From Least to Most Difficult With Spanish-English Cognates in Bold and Cognate Suffixes in Italics", which was used to test students' master of morphology. So I have no idea what data analysis strategies did they use or the way in which data were collected or the timeline of the four different measures.

According to Kieffer and Lesaux, after analysing the data, they got two findings. Firstly, they recognized that morphology and reading comprehension were closely related for students in fourth and fifth grade, and morphology played an increasingly important role as students grew older. In other words, "students with greater understanding of morphology also have higher reading comprehension scores when holding constant their word reading fluency... students' understanding of morphology was a better predictor of reading comprehension than their vocabulary level."(Kieffer&Lesaux, 2007) The second finding was students with larger vocabularies were more possible to have a better master of morphology (Kieffer&Lesaux, 2007). Since the purpose of the article was to check whether morphology would be a perfect tool for students to strengthen reading comprehension and vocabulary, I think these two findings supported the theory. However, considering the lack of detailed investigation results and description of data analysing procedure, the two findings seemed to be relatively not persuasive or convincing. The other purpose of the article was, based on the two findings, to provide four principles about morphology teaching, to be specific, word-attack strategy, to educators.

The principle 1 required that morphology teaching should be combined with rich and explicit vocabulary instruction. Instead of explaining why morphology teaching needed clear vocabulary instruction, I think authors have concentrated too much on explaining and depicting what was a rich and explicit vocabulary instruction and how to conduct it. In fact, the only sentence I found explained the necessity of vocabulary instruction was "morphology is related to, but also distinct from, overall vocabulary"(Kieffer&Lesaux,2007). Regarding the connection between morphology teaching and vocabulary instruction, they mentioned Beck, McKeown, and Kucan suggested that although teachers did not address morphology particularly, teachers should emphasize the relationships among words based on their shared roots, prefixes, or suffixes when they choose academic words from texts and provide explanations engage students in actively dealing with word meanings.(Beck, McKeown & Kucan, 2002, quoted in Kieffer&Lesaux, 2007)

Their principle 2 suggested that morphology can be regarded as a cognitive strategy and teach students to use morphology with explicit 4 steps to break a word down into morphemes. I think this four-step method was quite applicable and useful. In principle 3, Kieffer and Lesaux suggested the morphological knowledge should be taught both explicitly and in context. They thought the ability to break words down into morphemes requires a certain amount of linguistic knowledge. The three kinds of knowledge were knowledge about prefixes and suffixes, how words get transformed

and roots. For me, I failed to figure out that these knowledge make sense with context. Especially, Table 3 was a word chart that was used to display various forms of key words and let students understand the word transformation. However, the words in Table 3 were selected from a newspaper article instead of any academic text that students were required to understand.

For students who can speak Spanish well, teachers could teach them to recognize and use cognates which means encouraging them to pay attention to words with similar spelling and meaning in two languages, such as *information* and *información*. What principle 4 suggested was reasonable, but, in my opinion, also a bit demanding for teachers. It can not make sure that every reading teacher the Spanish-speaking students encounter has some knowledge about Spanish.

This article has taken English native speakers and Spanish-speaking students as investigation targets, which has both potentials and limitations. Firstly, the teaching principles can be also applied to other languages such as French, which, just like Spanish, are cognates of English. Whereas, for those came from Asia, like China and Japan, or anywhere and their mother languages do not belong to the Indo-European, are these findings in this article still applicable? So, when Kieffer and Lesaux conducted their investigations, besides English native speakers and Spanish-speaking students, they can expand their participants to Asian students.

Conclusion

In order to address “fourth-grade slump”—many students succeed in learning to read and comprehend simple texts in the early grades, yet struggle to comprehend grade-level texts in the upper elementary years (Chall, 1983), Michael J. Kieffer and Nonie K. Lesaux found the knowledge of morphology, especially the ability to distinguish morphemes from long and complicated words could be very potential. So they advised four teaching principles to teachers. The two authors have basically explicitly explain the mutual influence among morphology, vocabulary and reading comprehension, and corresponding hypothesis and assumptions have basically been addressed, although the lack of detailed data has negatively influence the reliability of investigation results. The teaching suggestions about morphology were of great reference value. Considering the investigations mentioned in this research, I think mixed method can be a better choice and the investigation scope, besides English- and Spanish-speaking students, can be expanded to Asian students whose mother languages are so different from English.

Reference

- Anderson, R.C. & Nagy, W.E. 1992. The vocabulary conundrum. *American Educator*, 16(4), 14–18.
- Beck, I.L., McKeown, M.G. & Kucan, L. 2002. *Bringing words to life: Robust vocabulary instruction*. New York: Guilford.
- Chall, J.S. 1983. *Stages of reading development*. New York: McGraw Hill.
- Cunningham, A.E. & Stanovich, K.E. 1991. Tracking the unique effects of print exposure in children: Associations with vocabulary, general knowledge, and

- spelling. *Journal of Educational Psychology*, 83, 264–274.
- Freebody, P. & Anderson, R.C. 1983. Effects of vocabulary difficulty, text cohesion, and schema availability on reading comprehension. *Reading Research Quarterly*, 18, 277–294.
- García, G.E. 1991. Factors influencing the English reading test performance of Spanish-speaking Hispanic children. *Reading Research Quarterly*, 26, 371–392.
- Juel, C. 1988. Learning to read and write: A longitudinal study of 54 children from first through fourth grades. *Journal of Educational Psychology*, 80, 437–447.
- Kieffer, Michael J. & Lesaux, Nonie K. 2007. Breaking Down Words to Build Meaning: Morphology, Vocabulary, and Reading Comprehension in the Urban Classroom. *The Reading Teacher*, 61(2), 134–144.
- Leontjev, Dmitri. 2016. L2 English derivational knowledge: Which affixes are learners more likely to recognise? *Studies in Second Language Learning and Teaching*, 6(2), 225–248.
- Nielsen, D.C., Luetke, B. & Stryker, D.S. 2011. The Importance of Morphemic Awareness to Reading Achievement and the Potential of Signing Morphemes to Supporting Reading Development. *Journal of Deaf Studies and Deaf Education*, 275–288.
- Proctor, C.P., August, D., Carlo, M. & Snow, C.E. 2005. Native Spanish-speaking children reading in English: Toward a model of comprehension. *Journal of Educational Psychology*, 97, 246–256.
- Rupley, W.H., Logan, J.W. & Nichols, W.D. 1998/1999. Vocabulary instruction in a balanced reading program. *The Reading Teacher*, 52, 336–346.
- Stanovich, K.E. 1986. Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, 21, 360–407.