The Role of Morphology and Sentence Context in Word Processing for Adults with Low Literacy

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Literacy is a required skill for everyday interactions at home, at work, and in public. However, over 40% of Americans read at or below a basic reading level required for daily life, which can have far-reaching effects. Adults with low literacy are more likely to fall below the poverty line, and children of parents with low literacy levels have a 73% chance of ending up at the lowest reading levels themselves. These effects of low literacy are powerful and long-term, and it is important to understand what affects adult literacy development in order to make future improvements. In this project I explored the relationships between morphological complexity, context strength, vocabulary skills, and word processing. Morphologically complex words are those that can be broken down into smaller components. For example, the word colorful can be split into the root word color and the suffix –ful, and breaking down more complex words can help readers to understand them. Contextual clues within a sentence present another tool for readers to use in figuring out the meaning of an unfamiliar word. Vocabulary depth, or how much a person knows about a word, has been shown to correlate with reading ability and word processing as well.

In this project, I investigated the influence of morphological complexity, root word frequency, and context strength on vocabulary acquisition and word processing of adults with low literacy. I analyzed how participants with higher and lower vocabulary depth skills processed these factors differently. 41 participants read 36 sentences containing words of varying morphological structure embedded in sentences with or without supportive context clues, and completed a variety of vocabulary depth and breadth tasks. Participants spent less time reading the morphologically complex words with high-frequency root words than those with low-frequency base words or the inaccessible words. Additionally, I found marginally significant results showing that readers spent less time on the target words in sentences with supportive context regions than the neutral sentences. Vocabulary depth correlated with less time spent reading the high-frequency base morphologically complex words, and with higher scores on the vocabulary acquisition task for all three word types. This suggests that both morphological awareness and vocabulary depth are important for word processing and reading comprehension in adults with low literacy. Further studies investigating the effects of explicit reading instruction based on these factors for adults with low literacy would build on this research, ultimately allowing it to be applied back into classrooms.

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