The Influence of Morphology on First-Grade Children’s Spellings

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Introduction:

- Common models of literacy development suggest that morphology influences spelling and reading relatively late (e.g., Adams, 1990; Ehri & McCormick, 1998; Gentry, 1982; Moats, 2000).
- Other researchers have found an early morphological influence on literacy development (e.g., Carlisle, 2005; Carlisle & Flemming, 2003; Rubin, 1988; Treiman & Cassar, 1996; Treiman, Cassar, & Zukowski, 1994).
- Treiman and colleagues found first-grade children applied morphological knowledge in their spellings of one- and two-morpheme words with flaps (e.g., dirty, cuter) and final consonant clusters (e.g., find, tuned) (Treiman et al., 1994) and final consonant clusters (e.g., find, tuned) (Treiman & Cassar, 1996).
- Rubin (1988) found that first-grade children who performed poorly on an oral morphological knowledge test were more likely than those who performed well to omit final consonants from two-morpheme words than one-morpheme words.
- Children’s early morphological awareness is generally limited to transparent derivatives and common words (Carlisle, 2000; Carlisle & Normanbhy, 1993).

Research questions:

1. Do typically developing first-grade children evidence morphological awareness in their single-word spellings and morphological generations?
2. Is there a difference between first-grade children’s level of morphological awareness between transparent and opaque word derivatives?
3. Is performance on a morphology generation task related to single-word spellings of two-morpheme words?

Participants:

- 44 first-grade elementary school children
- No ESL or cognitive impairments
- Typical spelling skills (TWS-4)

Tasks and Procedures:

- Morphology generation task
  (Carlisle, 1988; 2000; Carlisle & Normanbhy, 1993)
  - Administered individually
  - 15 derivatives:
    - Inflected (e.g., car–cars)
    - Transparent (e.g., swim–swimming)
    - Opaque (e.g., decide–decision)
  - Base word given and children orally generated derivative to complete sentence (e.g., sad: Jim could not control his ___.)

- Morphology single-word spelling task
  (Treiman & Cassar, 1996; Treiman et al., 1994)
  - Administered to group
  - 22 one- and two-morpheme words:
    - Flaps and final consonant clusters

Results:

- Children spelled significantly more two-morpheme r-flap words with / (M=2.45, SD=.74) than one-morpheme words (M=.98, SD=1.05) \[ t(41) = -11.09, p<.05 \].
- Children omitted the first consonant in final clusters significantly more in one-morpheme (M=.88, SD=1.06) than two-morpheme words (M=.57, SD=.83) \[ t(41)=2.17, p<.05 \].
- Children generated significantly more words with a transparent derivational relationship (M=2.30, SD=1.17) than those with an opaque derivational relationship (M=1.23, SD=1.16) \[ t(43)=545, p<.05 \].
- Performance on the morphology generation task was significantly and positively correlated with students’ correct spellings of two-morpheme words \( r=.43, p<.05 \).

Discussion / Future Directions:

- Our findings replicated those of Treiman & Cassar (1996) and Treiman et al. (1994) and revealed that typically developing children as young as first grade evidenced morphological awareness without any explicit instruction in this area.
- This awareness translated into students’ spelling abilities – correct spellings of two morpheme words were positively correlated with a morphological generation task.
- Given the early development of morphological awareness, treatment programs integrating this linguistic component may be introduced in the early school years.
- Future plans for this research include examining first-grade children’s use of morphological knowledge in creative writings.
- Continued investigation is needed to determine which morphological awareness tasks best predict later literacy achievement.
- Researchers should continue to study morphological awareness intervention with early elementary school children.

<table>
<thead>
<tr>
<th>MEAN NUMBERS OF WORDS SHOWING VARIOUS SPELLING PATTERNS</th>
<th>(Standard Deviations in Parenthesis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Type</td>
<td>Words in which 1st consonant of final cluster retained</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>1 morpheme</td>
<td>0.05 (0.22)</td>
</tr>
<tr>
<td>2 morphemes</td>
<td>0.57 (0.67)</td>
</tr>
</tbody>
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See handouts and references at http://convention.asa.org/handouts.cfm