Morphological Awareness and Literacy Achievement in First- and Second-Grade Children

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Introduction:
• Morphological awareness is the awareness of words’ morphemic structure and the ability to reflect on and manipulate that structure (Carlisle, 1995).
• Studies of adults and older children have demonstrated that morphological knowledge plays a role in reading complex words (e.g., Elbro, 1990; Elbro & Arnhak, 1996; Fowler & Liberman, 1995; Nagy, Berninger, & Abbott, 2006) as well as in spelling and reading comprehension (e.g., Nagy et al., 2006).
• Carlisle (1995) conducted a longitudinal study which followed children from kindergarten through second grade and found that first-grade morphological awareness made a significant contribution to later reading achievement.
• With regard to spelling in the early elementary years, Nunes, Bryant, and Birdman (2006) found that six-year-old children’s inflectional spellings predicted their morphological awareness performance at the ages of seven and eight.
• Morphological knowledge has been creatively measured in first-grade children from kindergarten through second grade and found that first-grade morphological awareness made a significant contribution to later reading achievement.

Purposes:
To determine whether first-grade morphological awareness measures predict reading and spelling achievement at the first- and second-grade levels.

Participants:
• 34 children
• Tested in first and second grade
• Enrolled at an Elementary school in the Intermountain West
• Hearing, cognition, and language abilities within normal limits

Methods:
1st Grade: Variables of Interest:
(Carlisle, 1989; 2000; Carlisle & Nomanbhoy, 1995)
• Inflected (e.g., car–cars)
• Transparent (e.g., swim–swimming)
• Open (e.g., decide–decision) (e.g., sad: Jim could not control his ___)

Morphological single-word spelling task
(Treiman & Cassar, 1996; Treiman et al., 1994)
24 one- and two-morpheme words, flaps and final consonant clusters

2nd Grade: Variables of Interest:
Woodcock Reading Mastery Test- Revised (Woodcock, 1998)
• Word Identification, Word Attack, and Passage Comprehension (2nd grade only) subtests
Test of Written Spelling – 4 (Larsen, Hammill, & Meaux, 1999).

Variables for Regression Analysis:
• Morphological Awareness Composite:
  • Morphological Generation total raw score (Carlisle, 1988)
  • Morphological spellings which indicated retention of base words based on work of Treiman & Cassar, 1996; Treiman et al., 1994; Wolter, Wood, & D’Zatko, in press).
  • 2 morpheme words, final consonant cluster retained (e.g., tuned)
  • 2 morpheme words, first consonant of cluster retained (e.g., tum for tuned)
  • 2 morpheme words, /t/ spelling for /d/ flaps (e.g., dirty)
  • Reading Comprehension Composite: maze and cloze raw scores (Carlisle & Rice, 2004)
  • Spelling: TWS-4 standard score

Results:

Regression Findings

Discussion:
• These initial findings were consistent with past research reporting the significant contributions of morphological awareness to reading in the early years (e.g., Carlisle & Nomanbhoy, 1993; Carlisle, 1995; Nunes et al., 2006).
• Taken together, these findings indicate that morphological awareness may prove to be an important factor in early literacy development, one which may be potentially valuable for inclusion in early literacy screening instruments.
• The lack of significant findings for the second-grade spelling and reading comprehension tasks may have been due to low power or instrument sensitivity.
• Future research directions include applying a spelling scoring system with increased sensitivity, Spelling Sensitivity Scoring procedure (Masterson & Apel, 2007), and replicating with larger sample sizes and multiple populations.


