

## **A Morphological Approach to Improve Reading Comprehension**

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### **Background**

Individuals with language deficits present with impaired comprehension and/or use of oral and/or written language which may involve phonology, morphology, syntax, semantics, and/or pragmatics (ASHA, 1993). Remediation of these areas helps to allow for academic success. Understanding of morphological patterns facilitates vocabulary growth throughout the school aged and young adult population. Reading comprehension of academic materials relies on knowledge of the Latin and Greek influence on the Anglo-Saxon system. Spelling proficiency is additionally impacted by knowledge of morphology.

- Limited assessment for targeting knowledge/use of more advanced derivational morphology for older students is available.
- Larsen and Nippold have proposed a well designed, easy to replicate dynamic assessment appropriate for typically developing middle school children called the *Dynamic Assessment Task of Morphological Assessment* (DATMA, Larsen & Nippold, 2007).
- Use of dynamic assessment allows for the collection of qualitative as well as quantitative data which can lead to a more comprehensive view of the student's needs and abilities.

### **Summary of Research**

- Moats, L & Smith, C. (1992). Derivational morphology: Why it should be included in language assessment and instruction. *Language, Speech, and Hearing Services in Schools*, Volume 23, 312-319.
  - Literature indicates that knowledge of the meaningful part of words, ways in which they are combined, and how they are represented in spelling all help children acquire vocabulary.
  - Knowledge of root words and affixes facilitates rapid, efficient, and accurate reading of unfamiliar vocabulary, in addition to reading comprehension.
  - Most new words are encountered through reading; only a limited number are taught directly.
- Apel, K. & Swank, L. K. (1999) Second chances: Improving decoding skills in the older student. *Language, Speech, and Hearing Services in Schools*, Volume 30, 231-242.
  - Morphological awareness is crucial for recognizing unfamiliar words that cannot be decoded phonetically, allowing readers to access meaning based on their knowledge of root words, inflections, and derived forms.
  - Some researchers have found that poor morphological awareness contributed to poor decoding skills.
  - Students with poor decoding abilities often demonstrate less morphological awareness on written language tasks, such as changing root words to derived forms or identifying whether pairs of words represent forms from the same root class, than do children with adequate decoding skills.
- Nippold, M.A. (2007) *Later language development: School-age children, adolescents, and young adults*. Austin, TX: Proed, Inc., pg 53.
  - Above grade level 3 reading, textbooks that are used to teach academic subjects (mathematics, science, and social studies) provide exposure to increasing number of morphologically complex words.

## **Purpose**

To utilize the qualitative and quantitative data from the DATMA to plan a therapy program targeting derivational morphological skills.

## **Method**

### **Participants**

Four male middle school students (mean age 11;3, range: 11;2-12;6) with documented literate language disabilities who were receiving treatment at the Northern Illinois University Speech-Language-Hearing Clinic participated in this study. They attended various public and private schools in the north-central Illinois region. All were referred with academic concerns due to deficits in spoken and written language abilities. All participants exhibited cognitive abilities within the average range.

### **Procedure**

- The DATMA was administered and therapy goals were planned according to both qualitative and quantitative data collected
- An 8 week intensive derivational morphological therapy program was created to meet the needs of each participant as well as the group as a whole.
- Weekly therapy sessions consisted of one hour individualized sessions and an hour and a half group session
- Targeted derivational morphological skills were taught and/or reviewed during individual sessions.
- During group sessions, interactive games/activities were used as reinforcement/motivation while practicing each newly taught skill.
- A homework program was created to encourage carry-over of derivational morphological skills to the home environment.
- The DATMA was re-administered at the conclusion of therapy.

### *Treatment Goal:*

- Students will increase vocabulary knowledge through use of:
  - a. Age/grade appropriate suffixes.
  - b. Age/grade appropriate prefixes.
  - c. Age/grade word roots.

### *Session Objectives:*

- Identify the various parts of multi-syllabic, complex words (i.e. prefix, suffix, and root)
- Utilize Greek combining forms and/or Latin word roots, prefixes, and suffixes to create a word
- Derive meaning of unknown words using the meaning of known parts (i.e. suffix, prefix and/or root)
- Utilizing the same Greek /Latin morpheme to create multiple words (i.e. projection, projector)
- State the meaning of a multi-syllabic, complex word in your own words

### *Strategies*

It was important for the clinicians to provide resources for the clients, which were included in a Language-Literacy Resource Binder that traveled between home and the clinic each week. For this unit, the Resource Binders included:

- Lists of common prefixes, suffixes, and word roots including definitions
- Spelling-change rules
- Lists of grade appropriate Greek combining forms/Latin word roots with definitions and common words for each

### *Activities:*

Keeping the population demographics in mind (i.e. middle school males) and the dry nature of the material to be presented, the clinicians created games/activities that were of high interest and motivating for the clients. Activities included:

- A group “blog” was created for the participants to post new words that they had found during the week and for which they did not know the meaning. The first 10 minutes of each individual session was used for posting new words and responding to other participants’ words.
- A giant 6’x 6’ outside game board was created and words utilizing the targeted prefixes, suffixes, roots, and combining forms were written in each cell. The participants rolled two dice and selected the corresponding row, column and were expected to give the meaning of the word.
- Various word games where points were awarded for identifying each part of the word and then stating the meaning of the word as a whole.
- Timed games where the participants were placed in teams of two; and they were given a particular amount of time (e.g., 60 seconds) to come up with as many words as possible utilizing a given root and given a point for each word they created.

### **Results**

- Beginning of Treatment
  - 3 out of 4 clients had little to no understanding about how a word could be broken down
  - Participants viewed the word as a whole rather than recognizing word parts
- End of Treatment
  - Clients were able to break the target word into parts with out prompting
  - Demonstrated knowledge that each morpheme contributed to the meaning of the word
  - Continued difficulty determining the meaning of the word as a whole for some words
    - For example, one client determined the meaning of the word “spoilage” by saying, “I know spoil means ruined and the suffix is age, but I don’t know what the word means.”

### **Conclusions**

The DATMA provided the graduate student clinicians with relevant data on which to plan treatment. Quantitative data rated the participants’ morphological knowledge, and qualitative data indicated the level of support needed to identify all the meaningful parts of a word and use those parts to determine meaning. Targeting derivational morphology helped the clients understand that words can be broken down into smaller parts to derive the meaning of more complex words that they encounter in their academic reading. Qualitative data gathered at the end of the eight weeks indicated that this approach was effective in increasing the morphological awareness of the clients; however further intervention is recommended to facilitate building word meaning from the word parts.

### **References:**

Larsen, J. & Nippold, M. (2007). Morphological analysis in school-aged children: Dynamic assessment of a word learning strategy. *Language, Speech, and Hearing Services in Schools*, 38, 201-212.

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