

# The Use of Non-words as Targets in the Treatment of Speech Sound Disorders in Children

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## Abstract

The purpose of this poster is to explore non-words (NWs) as targets in the treatment of speech sound disorders (SSD) in children. To better understand the basic science behind word lexicality and phonological learning, the mechanisms at work will be explained. Non-words, phonological representation, and lexical representation will be defined in order to further understand the potential benefits of using non-words in therapy.

## Learning Objectives

1. Define non-words, phonological representation, and lexical representation.
2. Explain the basic science behind how non-words boost phonological learning.
3. Implications for further research and practice.

## Background

Traditionally, real words have been used as targets in the treatment of (SSD) and little importance was placed on word selection. Current evidence suggests word selection does impact phonological learning. Researchers have theorized that (NWs) would be beneficial to use as targets in therapy because of the connection between word lexicality and phonology. Children could benefit from using (NWs) in therapy because the child would have no prior exposure to the word and the sounds, words, and connections are all being learned at the same time. In effect, the child's focus is on articulatory routines and there is no competition for syntactic, semantic, or lexical information because there is no associated lexical information.

## Definitions

Non-words: words that resemble real words but have no true meaning (i.e. steg, roudge, rechim).  
Phonological representation: the storage of phonological information about words in long-term memory (Sutherland & Gillon, 2005).  
Lexical representation: corresponds to a word as a whole unit (e.g., /dag/ for "dog") (Cummings, Hallgrimson, & Robinson, 2019)



## Basic Science

Researchers have theorized that (NWs) would be beneficial to use as targets in therapy because of the connection between word lexicality and phonology. The mental lexicon stores representations of phonemes, also called the phonological representation, in the phonological system. Therefore, (NWs) could improve phonological learning because sounds, words, and connections are being learned simultaneously. (NWs) could reduce cognitive processing demands which could allow for more effort to be placed on processing of sounds and not on processing the lexical representation.

## Conclusions

Researchers have cautioned that children with reading and language impairments may have lower abilities in reading non-words and this treatment mode may not be as beneficial. However, for children without these impairments, implementing this treatment could boost phonological gains significantly. NW's could enable faster learning of targets and potentially greater phonological learning overall.

## Clinical Implications

Children with (SSD) treated with NWs demonstrated large decreases in sound error inconsistency suggesting that NWs may be more effective in establishing adult-like phonological representations (Cummings & Barlow, 2011). This implies that children given NWs in treatment could far better than using Real Words (RWs) in therapy. Studies have concluded that more research with larger groups need to be done. However, this treatment has the potential to be efficacious in the clinical setting.

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