

We performed a corpus study and a WUG-test to investigate the contribution of frequency and naturalness to the acquisition of voicing and vowel alternations in the the German nominal paradigm by German children. Even though we found that both alternations are of roughly the same frequency, children have a better grasp of voicing alternations than of vowel alternations. In existing words they make mistakes in vowel alternations, but not in voicing alternations. In novel words they produce voicing alternations in novel words, but not vowel alternations.

There are two alternations in the German nominal paradigm. The first, *final devoicing* is a natural process. The voicing contrast in obstruents is neutralized word-finally. It is natural since it is grounded in perception (Steriade, 1997). (2) *Umlaut* is an unnatural process in which a back vowel is fronted. It is unnatural since fronting does not make the stem vowel easier to produce or perceive, nor is there a distinctive feature in the phonological context that justifies fronting.

The relative contribution of frequency and naturalness to the acquisition of alternations has been studied for adults (Pater & Tessier, 2003; Peperkamp et al., 2006; Becker et al., 2007; Baer Henney, 2009; Hayes et al., 2009) but not for children. In our experiment we find that children can learn unnatural alternations, but they are more confident about natural alternations, in agreement with the literature on adults (Baer Henney, 2009; Hayes et al., 2009).

In our corpus of 945 singular-plural nominal pairs 10% of the nouns show an alternation: 6% vowel alternations and 4% voicing alternations. In a wug-test with 40 existing words and 40 novel words with 17 German children aged 4;9 to 6;2 we found that children correctly use both the vowel and voicing alternations in *existing* words. In *novel* words children tended to generalize the natural voicing alternations but not the unnatural vowel alternations. This suggests that natural alternations are easier to learn.

References

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