

Vowel quantity in Polish learners' productions of L2 German

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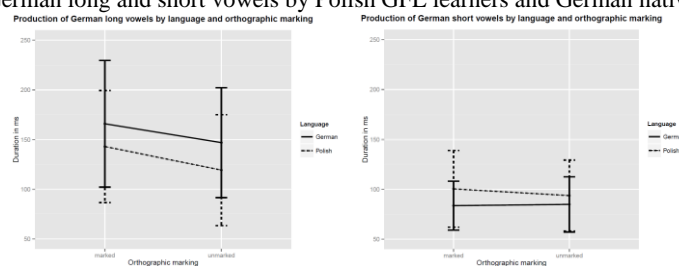
This study explores the production of German vowels by Polish learners of German as a Foreign Language (GFL), with special emphasis on vowel quantity and the influence of orthography on production. Vowel quantity has been claimed to be a prominent problem for Polish speakers of German (Morciniec 1990, among others), as vowel length is not contrastive in Polish while it is in German (Ternes 2012). However, very little experimental research has been carried out to test that claim. On the other hand, a considerable amount of research has been carried out on L2 vowel length perception (Bohn 1995, Cebrian 2006 or Altmann et al. 2012), where researchers claim that vowel quantity cues are always easy to access regardless of listeners' experience with quantity in their native language. Assuming that L2 perception aids L2 production (e.g. Flege 1995), one could draw the conclusion that vowel quantity would be easy to learn in L2 production as well. The role of orthographic marking of length (or lack thereof) has not been investigated experimentally either, though some researchers have briefly discussed it (Cebrian 2006).

In order to investigate the influence of the Polish vowel system on L2 German vowel quantity (as well as quality, as German, for most of its vowels, exhibits an interplay between the two dimensions), 21 Polish learners of L2 German (mean age 18.5 (SD=.6) and 21 native German speakers (mean age 17.5 (SD=.9) were recorded while performing a production task with 48 German words. The participants were recruited at two Polish high schools as well as at a German high school in the West of Germany. Recordings were made with a high-quality compact recorder (Korg MR2) in quiet classrooms. The segmentation and acoustic analyses of all productions were done using PRAAT.

Because we were interested in the effect of orthography on L2 vowel representation (and not on its immediate effect in a reading task), we conducted a picture-naming task which included 24 words with short (8 x (/a/, /ɛ/, /ɔ/)) and 24 word with (8 x /a:/, /e:/, /o:/) long German vowels. In 12 test words, vowel length was marked with so called *lengthening h* (for example *Sahne* [za:nə] "cream"), while the other quarter of all test words did not (explicitly) mark vowel length (for example *Gabel* [ga:bəl] "fork"). In order to investigate whether the correct production of vowel shortness may also be influenced by explicit orthographic marking, 12 test words contained short vowels which were followed by double consonant letters (a reliable marker for a preceding short vowel, for example in *Schatten* [ʃatən] "shadow"), while the other half of the words with short vowels did not exhibit this kind of marking (for example *Tasche* [taʃə] "bag").

We hypothesized a) that German long vowels spoken by Polish GFL learners would be significantly shorter than those spoken by German native speakers (despite the findings in L2 perception mentioned earlier), and that b) vowels with explicit orthographic markings would be more correctly produced (either shorter or longer, depending on the vowel category) than those without. Figure 1 shows preliminary results related to our hypotheses as regards the productions of German long and short vowels by German natives (dashed lines) and Polish GFL learners (solid lines).]

Figure 1: Production of German long and short vowels by Polish GFL learners and German natives (four speakers per group)



Statistical tests (ANOVAs) confirmed that our data for long vowels show the expected main effect of language (hypo. a), but also an unexpected main effect of orthography and no significant interaction (hypo. b). The same is true for short vowels (however, no main effect of orthography in that case). Though there is some evidence of learning, given the generally shorter short targets than long ones, the main effects of language can be explained by the influence of the L1 on the L2. The main effect of orthography, however, may be related to a language universal effect of vowel lengthening in front of sonorants, as German *lengthening h* only appears before /m, n, l, r/.

References

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