

The purpose of the investigation is to assess the degree to which native Polish learners of English can imitate acoustic properties of English vowels, including their quality, durational contrasts, and spectral variability. Since Polish and English differ in terms of how these properties are specified in their vocalic inventories, the speech of Polish learners of English is bound to exhibit cross-linguistic interference. This means that their realisation of English vowels is likely to exhibit Polish characteristics, which contributes to the perception of foreign accent, and possibly to miscommunication. The main question asked in the current investigation is whether Polish learners of English can assume more English-like properties in their speech, after an immediate exposure to a native English speaker. What is also of interest is how age, language proficiency and orthography affect the degree of imitative performance.

To answer the research questions, two groups of participants, young (less proficient) and adult (more proficient) learners of English, were engaged in an experiment, where they were asked to first read English words, and then repeat the same words, as produced by a recorded voice of a native English speaker. To determine the effect of orthography, only half of the participants had access to the words' spelt forms in the imitation task. The participants' productions from both tasks were recorded and subjected to acoustic and statistical analyses. The measures included: relative vowel duration difference, mid-point values of formant frequencies (F_1 and F_2), trajectory length, and spectral rate of change.

The results confirmed that both young and adult Polish learners of English are capable of approximating native English vowel properties, related to durational and qualitative (static and dynamic) properties. Both groups showed observable imitative performance, which was primarily driven by initial participant-to-model phonetic distance. No effect of orthography was ascertained on the degree of imitation. On the whole, the current investigation demonstrated that subtle qualitative vowel properties are subject to imitation. It was also concluded that caution should be exercised when judging varying degrees of imitation across different features or groups. Finally, the study showed that imitation practice is an effective way of improving pronunciation in the second language, even in the case of highly proficient learners.

The dissertation is divided into five chapters. In Chapter 1, what is offered is a general discussion of the process of imitation, which then focuses specifically on phonetic imitation, with various factors affecting it, which is culminated in a review of studies within the context of second language speech imitation. Chapter 2 explores the differences related to the vocalic systems in Polish and English, with a special focus on vowel dynamics. Chapter 3 constitutes a brief overview of studies dealing with the impact of orthography on the speech of second language learners. The design of the current study is detailed in Chapter 4, which is followed by a discussion of the results for each of the three groups of tested parameters, related to vowel durational and qualitative contrasts. Finally, Chapter 5 captures the overall conclusions drawn from the findings, with regard to the research questions posed.