

This study investigates the phonetic variation in the production of the French rhotic /ʁ/ by adult Italian-speaking learners of L2 French. Data were collected from 18 participants residing in Lyon, (France), through a read-aloud task, consisting of 10 sentences designed to elicit the rhotic in all possible syllabic positions (e.g., onset, coda, syllables with an empty nucleus). The recordings were analyzed through auditory inspection and acoustic analysis, focusing on formant transitions and articulatory features indicative of rhotic realizations [1]. The results reveal significant variability in rhotic production. Substitutions of the target /ʁ/ with Italian-like apico-alveolar /r/ or its allophones [r, ʁ] were pervasive, particularly in learners with lower overall accuracy. Syllabic position influenced performance, with word-final rhotics (onset of syllables with an empty nucleus) exhibiting the highest rates of elision or vocalization. Analysis of F2 transitions highlighted systematic deviations in non-target-like productions, confirming the role of perceptual and articulatory salience in shaping learner output. Our findings align with trends observed in native Italian and French speakers, such as vocalization of rhotics, often defining clusters reanalysed as rhotic diphthongs [2, 3]. Contrary to expectations based on traditional L2 phonological acquisition models [4], factors such as age of arrival, length of residence and frequency of L2 use were inconsistently correlated with accuracy. Instead, our findings emphasize the influence of orthographic cues and L1 phonotactics in determining learner outcomes. Moreover, the high prevalence of apico-alveolar substitutions supports the hypothesis that rhotics constitute a phonetically diverse and universally non-specified category, as proposed by [5, 6]. Our results highlight the interplay between cross-linguistic influence, phonetic variation, and orthographic mediation in L2 acquisition, and confirm the positioning of rhotics inside the two different linguistic domains of Italian and French, and in the larger framework of universal patterns of phonetic variation [7].

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## **Title**

Phonetic variation in rhotic realizations in L2 French by Italian speakers