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Learning analytics and second-language context: a digital instrument for measurement of real-time data regarding second language learners achievement

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Abstract

The purpose of this study is to develop a reliable electronic instrument to collect, measure and report data about verbal behaviours, regarding the phonological awareness and specific language skills, of second language learners. After theoretical revision of concepts and a perspective about phonetic decoding process, we presented results regarding the segmentation (a) and minimum pairs (b) tests. Against the general principles of critical period hypothesis, in empirical study the older learners present higher than younger ones, revealing more structure and less interference at the phonological level. Specific phonological constraints might explain the phonetic decoding and perception at this specific context (second language and migratory experience). The tests battery is presented as an important educational and research tool applied in a digital environment considering the electronic setting and advantages as authentic measurement and analytic scenario for the scientific understanding about the decoding processes and cognitive constraints of language learners.

Keywords: Keywordslearning analytics in second language context, program of intervention in second language, language measurement, second and critical period hypothesis, learning improvement and digital resources, phonetic and phonological decoding, immigrant students in Portuguese schools

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