Many theorists suggest that languages are interconnected to one another and proficiencies involving more cognitively demanding tasks are common across languages. The ultimate intention of this study was to investigate how conscious mastery of forms and analytic skills developed in foreign language learning are likely to support mother tongue development. Consequently, with regard to the phenomenon of cross-linguistic transfer, this research tried to test how the hypotheses of the study stating that, a) there is no significant influence of L2 on L1 regarding syntactic development in freshman university students, and b) there is no significant influence of L2 on L1 regarding syntactic development in senior university students can be confirmed. To test these hypotheses, four groups of Esfahan University students, 30 each, were selected randomly; they were English-major freshmen, English-non-major freshmen, English-major seniors, and English-non-major seniors. All the participants were requested to write a passage on the same composition topic in Farsi to find out whether there is any influence of L2 on L1. By considering and analyzing the results based on 1) Loban Index, 2) Minimal Terminable Unit, and 3) Cohesive Ties, the first hypothesis for freshman university students was retained; however, the second hypothesis was safely rejected. This study denotes implications for educational planners, material designers, and non-native speaker language teachers.