The study assessed the effect of adjectives and noun premodifiers on L2 noun phrase comprehension and error types among on English Language Learners. We also examined the correlation between L2 noun phrase comprehension and L2 reading comprehension as well as the contribution of L2 noun phrase comprehension to L2 reading comprehension. One hundred and one Hebrew-speaking 11th graders were tested on the English noun phrase comprehension task, indexing cross-language effects (from L1 to L2). The task included sentences in four conditions, each representing a different noun phrase structures at the syntactic subject position: NN, NNN, AdjNN, and AdjNNN. Participants also completed L1 reading comprehension and L2 vocabulary tests that were controlled for in the correlation and regression analyses. Overall, the results indicate that sentences with noun premodifiers and no adjective premodifier were more challenging and more susceptible to Hebrew interference. Partial correlation analyses showed that participants' performance in all four conditions of the noun phrase comprehension test was significantly and positively correlated with their L2 reading comprehension. Multiple regression analyses revealed that higher accuracy and low error rate in the NN and AdjNNN conditions made a unique contribution to L2 reading comprehension when L1 reading comprehension and L2 vocabulary were controlled for. This study confirmed the significant effects L1 has on L2 syntactic knowledge which significantly relates and contributes to L2 reading comprehension abilities among adolescent students.