This study examined the acquisition of Japanese rhythm by comparing the rhythmic characteristics of elicited spontaneous speech of English learners in the setting of an oral proficiency test. Two metrics for the quantification of speech rhythm that have been shown to reliably discriminate rhythmic classes in both L1 and L2 speech (White and Mattys, 2007) were utilized for the analysis - 1) the proportion of vowel intervals within the sentence (%V), and 2) the standard deviation of vowel intervals divided by the mean vowel interval duration and multiplied by 100 (VarcoV). A difference in the rhythm scores of novice-mid and intermediate-high learners of Japanese was found. Furthermore, the learners’ scores were significantly different from Japanese native speakers’ scores, suggesting that speakers start acquiring speech rhythm relatively early, but they are still short of the target at the intermediate level of proficiency. By comparing the obtained scores with scores of stress-timed languages, such as English, the difference in the scores may be attributed to an L1 transfer into the rhythmic organization of the L2 speech.