

Immediate Integration of Location and Classifier Information in L1 and L2 Mandarin Processing: Evidence from Online Webcam Eye-tracking

While many studies suggest that L2 learners, similar to L1 speakers, also show evidence of predictive processing, the question remains as to what sources of information they use and to what extent they vary from native speakers. The present study replicated the visual world experiment in Wiener and Rohde (2018)¹ with improved materials (selected through a separate norming task), larger sample size, and a new web-based eye-tracking method, aiming to examine whether L1 and L2 listeners vary in their use of contextual and semantic cues as well as their integration of the two information sources. Both L1 and L2 Mandarin speakers heard sentences in Mandarin Chinese that begin with location information (e.g., “请看向衣橱”, “please look in the closet,...”), followed by the simultaneous presentation of a 2x2 slide containing four items and a spoken phrase including a classifier-noun match (e.g., “有没有一条围巾/蛇? ”, “... is there a CLASSIFIER scarf/snake?”). Different location (e.g., closet) information was given in each trial. Participants’ eye movements were then recorded as they looked for the target (e.g., scarf) among a location competitor (which may also appear in the given location e.g., socks), a classifier competitor (that shared class membership with the target but does not normally appear in the given location, e.g., snake), and a distractor (that shared neither location nor classifier information, e.g., watermelon). Through manipulating a conflict between the context and real-world knowledge (e.g., a scarf may appear in the closet whereas a snake does not), two conditions were created, namely a match condition (e.g., a scarf in the closet, which is in line with real-world knowledge) and a mismatch condition (e.g., a snake in the closet, which is contradictory to real-world knowledge). In match trials, both L1 and L2 listeners made correct predictions on the target noun before they heard it, indicating that both L1 and L2 listeners are capable of integrating contextual information (contained in location cues) and classifier information (contained in Chinese classifiers). Anticipatory processing and integration of both information were also found in mismatch trials, except that both L1 and L2 learners took some time to recover from the conflict between the context and real-world knowledge. To summarize, the findings add to the evidence of the integration of contextual and semantic information in both L1 and L2 Mandarin processing. Furthermore, the fact that the web-based eyetracking method also yielded credible results suggests more opportunities for future research.

¹ Wiener, S., & Rohde, H. (2018). *Immediate integration of real-world knowledge and classifier cues during Mandarin sentence processing*. Talk at the 30th North American Conference on Chinese Linguistics (NACCL). Columbus, OH.