Simultaneous visual and auditory input

— Applying the DRM paradigm to study the memory style of Chinese native speakers through separate testing modality —

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The modality effect in DRM paradigm has been confirmed in numerous studies using English materials. Specifically, less false memory is observed when studying visually than when studying auditorily. However, most studies using Chinese materials revealed that there is no modality effect in DRM paradigm. We hypothesized that the modality effect would not be observed because Chinese people input both visual and auditory information automatically regardless of the presentation modality. To examine our hypothesis, we employed a 4 × 2 between-participants design resulting in eight conditions. The first factor was the study modality: visual present, auditory present, visual present + articulatory suppression, and auditory present + phoneme recognition. The former two conditions were the standard conditions in DRM paradigm. The latter two were developed by adding one of two particular tasks to each standard condition to eliminate extra information inputs from the other modality during the study. The second factor was the test modality: visual and auditory. One hundred and fifty-nine Chinese undergraduates were randomly assigned to one of the eight conditions and asked to memorize ten lists of words and take a recognition test following each condition's instruction. The result showed that Chinese participants did input the visual information during the auditory study; similarly, they also input the auditory information during the visual study. However, the modality effect was significant on the visual test, whereas not on the auditory test. We also found that Chinese participants' recognition performance on unstudied but relevant words was similar to that of the studied words on the visual test, whereas, on the auditory test, they were similar to that of the unstudied words. The results showed that Chinese people might use different processes or mechanisms on visual and auditory tests. The response time results supported our conjecture: a great speed advantage of auditory study without task was found on the auditory test. The results indicated that some parts of the retrieval process might be omitted in the auditory study-auditory test condition. So, we concluded that although Chinese people tend to generate information automatically from another modality during studying. However, we also concluded that it was not due to this unique tendency for the modality effect in DRM paradigm was not observed, the testing method and Chinese people's advantage of auditory might be the key.