The On-line Processing of Kanji- and Katakana-presented Words in Japanese Texts

A Comparison of Greater and Lesser Lexical Knowledge Groups of Native Chinese Speakers Learning Japanese

YAMATO Yuko, TAMAOKA Katsuo

Key words: on-line processing, lexical knowledge, kanji- and katakana-presented words, loanword, native Chinese speakers learning Japanese

The present study investigated the effects of Japanese lexical knowledge on the reading process of two types of Japanese texts with many of both *kanji*-presented words and *katakana*-presented loanwords.

Previous studies indicate that script consistency between a first (L1) and second (L2) language facilitates speed of L2 lexical and text processing. For example, the Japanese and Chinese languages share various cognate pairs of *kanji*-compound words. Consequently, Japanese reading comprehension is relatively easier for native Chinese speakers learning Japanese than it is for other language groups. In contrast to their treatment of *kanji* compound words, Jinnouchi (2008) reported that many native Chinese speakers learning Japanese give loanwords a wide berth, since they cannot estimate the meanings of *katakana*-presented loanwords by employing their Chinese lexical knowledge. Linguistically speaking, over 90% of the loanword vocabulary specified for Japanese learners by the Japan Foundation (2002) is borrowed from English and is semantically translated in the Chinese language (e.g., 電脑 /dian4 nao3/, literally meaning 'electric brain' for 'computer'). In contrast, in the Japanese language, a majority of English loanwords are phonologically transcribed in the Japanese *katakana* script (e.g., インフォメーション /iNfomeRsyoN/for 'information'). Thus, it is assumed that native Chinese speakers learning Japanese must

experience considerable difficulty with understanding these loanwords. Due to the consistency of L1 and L2 scripts, it is hypothesized that native Chinese speakers learning Japanese can quickly process many *kanji*-presented words embedded in Japanese texts, and that in contrast, they will display slower processing speeds for understanding many *katakana*-presented English loanwords. Since these students cannot apply their mother tongue script and lexical knowledge, they must learn loanwords as new Japanese vocabulary with no involvement of Chinese lexical knowledge. As a result, the discrete tendencies of understanding *kanji*- and *katakana*-presented words will be influenced by their Japanese lexical knowledge. Thus, the present study compared the on-line processing of *kanji* words and loanwords in Japanese texts by participants comprising greater and lesser Japanese lexical knowledge groups of native Chinese speakers learning Japanese. Based on a Japanese vocabulary test, 51 native Chinese speakers learning Japanese were divided into two groups of greater and lesser lexical knowledge. At the time of the experiment, all participants had been learning Japanese in Japan, and were asked to read four texts displayed on a computer monitor using the self-paced reading technique. The speed of each word in the texts was automatically measured and recorded by computer.

This study found that the L1 and L2 script consistency influenced not only lexical processing but also the reading of Japanese texts. For texts with many *kanji*-presented words, no difference was found between the greater and lesser lexical knowledge groups in processing speed. As such, native Chinese speakers with either greater or lesser lexical knowledge can efficiently process *kanji*-presented words, likely utilizing their mother tongue knowledge of *kanji* characters. This result may be characteristic of native Chinese speakers learning Japanese, illustrating the superiority of native language script from the aspect of processing speed. In contrast, the processing speed of texts with many *katakana*-presented words showed significant differences between the cases of some unfamiliar loanwords (e.g., ボランティア),

and familiar ones (e.g., コーヒー). These results exemplified the importance of lexical knowledge. In addition, Japanese lexical knowledge showed effects on the processing of unfamiliar, *katakana*-presented loanwords since these words had been previously learned. Taken together, the findings suggest that unfamiliar, *katakana*-presented words are processed differently from *kanji*-presented words and familiar *katakana*-presented words.

(Yamato: Graduate School of Languages and Cultures, Nagoya University)
(Tamaoka: Graduate School of Languages and Cultures, Nagoya University)