THE INFLUENCE OF DIFFERENT SCRIPTS ON WORD RECOGNITION: A STUDY OF SUAN SUNANDHA RAJABHAT UNIVERSITY LEARNERS OF JAPANESE

Premvadee Na Nakornpanom *, **Achara Wongsothorn** ** & **Suwaree Yodchim** ***

*Faculty of Humanities and Social Sciences., Suan Sunandha Rajabhat University, Bangkok, Thailand,
E-Mail: premvadee.na @ssru.ac.th
** The Graduate School, Suan Sunandha Rajabhat University,
E-Mail: achara.wo@ssru.ac.th
*** The Graduate School, Suan Sunandha Rajabhat University,
E-Mail: suwaree.yo@ssru.ac.th

ABSTRACT

The Japanese writing system is complex and uses a mixture of three different scripts. Each script has its own certain function. Switching between the scripts; between *katakana* and *hiragana* might result in students' word recognition. This study attempts to clarify the visually familiar words which are easier for students to recognize the origin of loan words in Japanese than the visually unfamiliar words.

Keywords: Influence, Orthography, Japanese, Recognition

INTRODUCTION

Word recognition, the ability to read words accurately and automatically, is one of the essential skills for language learners to develop their reading and writing skills. The visual word recognition processes in any given language are affected by the nature of the relationships between orthography, phonology, and semantics for the words of that language [1]. Japanese linguistics traditionally distinguishes a minimum of three lexical classes: *wago* (和語), *kango* (漢語), and *gairaigo* (外来語) according to their origins. *Wago* is written with *hiragana* or *kanji* in their *kun* reading, *kango* is written with *kanji* in their *on* reading, and *gairaigo* is written with *katakana* [2]. The mixture of these three scripts is implemented in Japanese writing, and it is considered to be one of the most complex language writing systems. *Kanji* is the adopted logographic Chinese characters which are complex including shape, pronunciation, meaning and usage [3].

Hiragana and *katakan*a are both purely phonetic symbols not representing any meaning. Each of these scripts serves definite functions; *hiragana* is basically used for particles, words and parts of words while *kanji* is for the meaning of words though it also has pronunciations. *Katakana* is primarily used for foreign loan-words but it is also used for native Japanese words, and sometimes, it is to emphasize a word and onomatopoeia. *Hiragana* and *katakana* though derived from a common origin, today, each is used pragmatically for different purposes.

In order to master Japanese writing at the beginning level is a challenge for learners. *Hiragana* and *katakana* are phonetic symbols. Their sound value does not change, they always read the same even when put together in words. However, switching between the two scripts often involves switching between two reading processes [4]. This indicates that students had to spend more time to comprehend and respond to the word in the second script. However, this was not taken into consideration in the present study.

In addition, it was revealed that words written in their common written forms are easier for students to recognize than when words are presented in an unusual written form, and if the target words were loan words normally written in *katakana*, students had no difficulty performing word completion in *hiragana* or *katakana* [5]. Generally, as the level of the language in textbooks increased, *hiragana* and *katakana* usage decreased [6]. This indicated that the lower the level of the learners was, the more *kana* (hiragana and katakana) was used to reduce the burden in learning Japanese at the first stage [7]. An earlier study indicated that words written in different scripts, affected students' word recognition. The present study attempts to clarify these issues. The students were tested for word recognition written with two different Japanese scripts, switching between *katakana* and *hiragana*.

To study the extent to which students majoring in Japanese recognize the meaning of the word written in *katakana* script, and the extent to which students recognize the meaning of the word when switching into *hiragana* script.

METHODOLOGY

Method
Participants

Ninety-four students majoring in Japanese; 56 students in year 1 and 38 students in year 2 of Suan Sunandha Rajabhat Unversity participated in the study. The students had previous formal Japanese learning experience at a time of the test. The students in year 1 were enrolled in Japanese Foundation 2, and the students in year 2 were enrolled in Intermediate Japanese 2 at the time of the study. The participants were purposively collected since the previous study suggested that the lower the level of the learners was, the more *kana* (hiragana and katakana) was used.

Comprehension test

The total *katakana* words were coded from the 48 lessons of *Easy Japanese*, a program of Japanese language lessons produced by Japan's public broadcaster [8]. Among the lessons offered in 17 languages by the NHK World Lessons in Radio Japan, the lessons in the thai Language were used in this study. The lessons were written in *hiragana*, *katakana* and *kanji,* in which providing 15 words written in *katakana* and all words are nouns. All 15 words were grouped into two types: visually familiar words and visually unfamiliar words. As described earlier, each of Japanese scripts has its own function therefore usually only one of the scripts is used for a given content word in its conventional representation; such a word is rarely written in another script [9]. For example, *toire* トイレ restroom is usually written in *katakana* script (a conventional script) therefore *toire* トイレ restroom is visually familiar. For *manga* まんが commic book is usually written in *hiragana* script *or kanji script* so it is also visually familiar.

The test in List A (written in katakana) consisted of 11 visually familiar words and 4 visually unfamiliar words, and List B (written in hiragana) consisted of 11 visually unfamiliar words and 4 visually familiar words.

The students were introduced to the lessons (self-study) two weeks before holding the comprehension test. The students can learn basic grammar and useful expressions through lesson designed in audio-drama style.

Procedure

The comprehension test consists of 15 words which each word was written in two scripts: the test in List A was written in *katakana* and List B in *hiragana* on separated sheets, in which the words in List B were rearranged the order of the words. The test was conducted in their usual Japanese class. The students were asked to write the meaning of the words in List A and B into English within 10 minutes each. After completion of the words in List A, the students were handed the test of List B. The descriptive statistics were used to analyze the data.

RESULTS

Research findings revealed that the majority of students (70.33%) recognized the given words and gave the correct meaning of the words in List A. The visually familiar words; *kamera* カメラ camera (98.94%), *toire* トイレ restroom (97.87%), *keeki* ケーキ cake (97.87%), *tai* タイ Thailand (94.68%), *paatii* パーティー party (93.62%), ベッド bed (91.49%) and *shuukuriimu* シュークリーム cream puffs (91.49%) were high ration of recognition. The visually unfamiliar words; *maguro* マグロ tuna (22.33%), *gomi* ゴミ trash (28.72%), *toro* トロ fatty meat of tuna (29.79%) and *manga* マンガ comic book (34.04%) were lower ratio of comprehension by students as shown in Table 1.

Table 1
Percentage of Students' Words Recognition in List A

No.	Conventional Script	%	No.	Unconventional Script	%
1	kamera カメラ camera	98.94	12	manga マンガ comic book	34.04
2	toire トイレ restroom	97.87	13	toro トロ fatty meat of tuna	29.79
3	keeki ケーキ cake	97.87	14	gomi ゴミ trash	28.72
4	tai タイ Thailand	94.68	15	maguro マグロ tuna	22.34
5	paatii ぱーティー party	93.62			
6	beddo ベッド bed	91.49			
7	shuukuriimu シュークリーム cream puffs	91.49			
8	kurejittokaado クレジットカード credit card	88.30			
9	anime アニメ Japanese cartoon	76.60			
10	anna アンナ Anna	55.32			
11	horaa ホラー horror	54.26			

For the words in List B, the majority of students (63.90%) gave the meaning of the words correctly, which was at a slightly lower ratio than the words in List A. The visually unfamiliar words; *kamera* かめら camera had the highest ratio of recognition (84.04%) followed by *toire* といれ restroom (82.98%), *anime* あにめ Japanese cartoon (81.91%), *tai* たい Thailand (75.53%), and *beddo* べっど bed (74.47%) was equal to *keeki* けいき cake. For *kurejittokaado* くれじっとかあど credit card, it was hard to guess its meaning by the students (26.60%). The visually familiar words; *manga* まんが comic book and *toro* とろ fatty meat of tuna were highly recognized by the students (92.55% and 82.98% orderly), as shown in Table 2.

Table 2
Percentage of Students' Words Recognition in List B

No.	Unconventional Script	%	No.	Conventional Script	%
1	kamera かめら camera	84.04	12	manga まんが comic book	92.55
2	toire といれ restroom	82.98	13	toro とろ fatty meat of tuna	82.98
3	anime あにめ Japanese cartoon	81.91	14	gomi ごみ trash	64.89
4	tai たい Thailand	75.53	15	maguro まぐろ tuna	52.13
5	beddo べっど bed	74.47			
6	keeki けいき cake	74.47			
7	paatii ぱあてぃい party	53.19			
8	shuukuriimu しゅうくりいむ cream puffs	45.74			
9	horaa ほらあ horror	38.30			
10	anna あんな anna	28.72			
11	kurejittokaado くれじっとかあど credit card	26.60			

CONCLUSION AND FUTURE WORK

The present study revealed the extent to which students recognized the meaning of the word written in *katakana* script, and the effect when switching into *hiragan*a script. The visually familiar words, presented in conventional or familiar script, were recognized easier than the words written in unconventional or unfamiliar script. However, eleven words written with unconventional script in List B were not difficult for students to understand. It could be assumed that the students were familiar with the sounds of these words though rarely presented in this form. Normally, these words are not written with *hiragana* script since they are loan words, the words imported from English. For the compound loan words, *kurejittokaado* くれじっとかあど credit card and *shuukuriimu* しゅうくりいむ cream puffs, the length of the words might affect the familiarity of the words when they were written in unconventional script. If these words are written in their conventional script as in List A, the effect was rarely seen. Overall, shorter words were recognized easier than longer words.

The interpreted meaning of the influence of different scripts on word recognition could be seen, though the word samples were only fifteen words. In order to deeply understand and generalize the interpretation of the results, the sampling words should be broader and should be collected from many parts of speech. The English background of the students should also be taken into consideration.

ACKNOWLEDGEMENTS

REFERENCES

[1] Sugito, Seiju. (1989). *Kotoba no aizuchi to miburi no aizuchi* (Verbal backchannels and non-verbal backchannels). *Nihongo kyoiku* 67: 48-59. Nihongo kyoiku gakkai.

[2] Rudeemad Rodsuk. (2018). The Analysis of Knowledge and Ability of Understanding Kanji in Thai Students at the Beginning Level: The Case Study of the Kanji Proficiency Test Among Undergraduate Students at Suan Sunandha, *Proceedings ICBTS* 2018 Vienna.pp.324-329.

[3] DylmanEmail, A.S, and Kikutani, M (2017). *The role of semantic processing in reading Japanese orthographies: an investigation using a script-switch paradigm.* Online: 08 November 2017. https://link.springer.com/article/10.1007/s11145-017-9796-3. Springle Link

[4] Kess, F.J., & Miyamoto, T. (2000).The Japanese Mental Lexicon: Psycholinguistic Studies of Kana and Kanji processing. *John Benjamins*, Chapter 4 P106.

[5] Igarashi, Y., (2007). The Changing Role of Katakana in the Japanese Writing System: Processing and Pedagogical Dimensions for Native Speakers and Foreign Learners.*Canada: University of Victoria.*

[6] Champ, N, Gairaigo in Japanese Foreign Language Learning: A Tool for Native English Speakers? New Voices Volume 6.

[7] Joyce, T., Hodoscek, B., and Nichima, K. (2012). Orthographic representation and variation within the Japanese writing system: some corpus-based observations, *John Benjamins Publishing*.

[8] HHK World Japan (2015).Easy Japanese. https://www.nhk.or.jp/lesson/english/learn/ list/3.

[9] Chikamatsu, N. (19960. The effects of L1 orthography on L2 word recognition: A study of American and Chinese learners of Japanese Studies in Second Language Acquisition. SSLA, 18,403-432. the United States of America.