

# Are Domain Names Written in Japanese Easy to Understand ?

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## Abstract

In Japan, we have three notation systems for a word, to use Japanese (Hirakana, Katakana and Kanji), Romaji (Japanese written in alphabet), or English. We did an experiment to find out which writing system of Japanese were the easiest to recognize, memorized and used in using domain names when we use the Internet. The results showed that Japanese notation has precedence over Romaji and English on (1) understanding, (2) speed to input them on the mobile phones, and (3) recognition after one hour delay.

## Introduction

Spreading uses of the Internet in our daily lives make domain names more and more important. So far, acceptable letters to describe domain names were limited to a restricted set of alphabet letters. After the specification of the Internationalized Domain Names (IDN) is fixed, the uses of domain names written in Japanese (as shown Fig.1 (a)) are increasing. By using the IDN, people living in non-alphabet based cultures can use their own mother tongues to denote domain names.

The purpose of this study is to examine if the Japanese notation of domain names are effective in recognition, memory and input compared to the system based on the alphabet notation (Romanized Japanese or English).

## Experiments

Sixty university students and graduates in their twenties participated in the experiment, which included the following experimental phases:

(1) Exposure to words: Words (Japanese, Romanized Japanese, and English) which can be used as domain names are presented visually or orally, and their immediate recalls were examined.

Words used in the experiment were selected among the word pools based on the following criterion:

- Styles: Japanese, Romanized Japanese, English
- Presentation: Visual, Oral
- Word length: long, short
- Actual use: Whether a word is already used as a Japanese domain name or not
- Familiarity of the word: high, low

(a) 日本語.jp (b) nihongo.jp (c) Japanese.jp

Figure 1: Domain names written in (1)Japanese (2)Alphabet letters (3)English

Each participant is presented with 144 visual presentations and 24 oral presentations.

- (2) Speed of key inputs from mobile phones and PCs(Japanese, Romanized Japanese and English)
- (3) Recognition test: At the last phase of the experiment, we asked the participants whether they could recognize (identify correctly) words presented in words exposure session (1).

The whole experiment lasted for about two hours.

## Results

- Immediate recall

In text presentation, words in Japanese, English and Romanized Japanese are correctly recognized and written down in this order. In the oral presentation, the order was Japanese, Romanized Japanese and English.

- The speed of key input from a PC and a mobile phone  
Numbers of Japanese words from mobile phones were the biggest compared to Romanized Japanese and English words. When they inputted from PCs, number of words in Romanized Japanese and Japanese are bigger than that of English words.
- Recognition test (one hour afterwords)

According to the analysis of recognition test of words presented in session (1), we found English and Japanese words were significantly better recognized than Romanized Japanese.

## Discussion

In each of the results, Japanese words were better recognized, memorized and written down. The results indicates the uses of Japanese words for domain names would enable (at least Japanese) users better and comfortable environments for their Internet lives.