# LEARNING TO READ ENGLISH AMONG JAPANESE LEARNERS OF ENGLISH AS A SECOND LANGUAGE

by

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# Abstract

Although many studies have suggested the importance of basic skills (phonology, orthography, and syntax) in a native language when English native speakers learn an Indo-European language as a second language, little attention has been given to the importance of these basic coding skills when Japanese native speakers learn English as a second language. The aim of this study was to examine the relationship between the basic language coding skills such as phonology, orthography, and syntax in Japanese (native language) and that of English (foreign language) among Japanese learners of English as a foreign language. Forty-seven native Japanese speakers (18-45 years old) participated for this study. The participants were assessed with a word reading tasks (word identification) in Japanese and English and divided into two groups on the basis of the scores of the tests. The participants were administered word identification tasks, word attack (reading pseudo-words), oral cloze (syntactic tasks), and orthographic tasks in both English and Japanese. The scores of both groups in English and Japanese were compared. The results showed that the average readers scored significantly higher than the poor readers on word identification, word attack and oral cloze tasks. It reveals the importance of basic coding skills in a native and foreign language even though Japanese language is so different from Indo-European languages in terms of learning patterns and a writing system.

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# Introduction

Since reading disabilities have become one of the major concerns in Western nations, many articles have been devoted to discovering the underlying bases of reading problems. A number of studies (e.g.; Bradley & Bryant, 1985; Siegel & Faux 1989; Siegel & Ryan, 1988 Stanovich, 1988; Vellutino & Scanlon, 1986; Wagner & Torgesen 1987) have reported that poor readers have particular difficulties with basic language processing skills such as syntactic and orthographic skills and even greater deficits in phonological processing skills.

Little is known about the relationships between reading disabilities and foreign language learning problems, especially among Japanese learners of English as a second language. It is possible that there is a connection between reading and foreign language learning problems. Dinklage (1971) reported students at Harvard University with 3.5 or more overall GPAs but failed to pass foreign language courses. He suggested that the students have problems similar to reading disabled individuals; that is, they also showed histories of learning problems with basic language and phonological processing skills in their native languages. Fifteen years after Dinklage's study, Ganschow and Sparks (1986) also pursued the investigation of the etiology of foreign language learning difficulties. In a number of their studies, they found no differences on intelligence, attitude, or motivation between students with and without foreign language learning problems but they found the difference in basic language coding skills such as phonology, orthography and syntax in their native languages. They also believed that the majority of people with foreign language difficulties also had the most difficulty with the phonological aspect of foreign language learning, and these difficulties were related to their problems with native language learning. In other words, they speculated that both native and foreign language learning depended on basic language coding skills and "that problem with one language skills are likely to have a negative effect on both the native and the foreign language system" (Ganschow, Sparks, & Javorsky, 1998. P. 249).

In one study, Ganschow et al. (1991) compared successful and

unsuccessful foreign language learners on measures of intelligence, foreign language aptitude, oral and written language, and mathematics. Successful foreign language learners had received an A or B in at least two semesters of foreign language courses with at least 2.5 GPA. Unsuccessful learners had been given a waiver of the foreign language requirement. They found that students with fully passing grades showed significantly stronger native language skills on measures of syntax and phonology than those with foreign language requirement waiver. Sparks and Ganschow have conducted a number of studies (e.g. Ganschow & Sparks, 1896; 1991; 1993; 1995; Ganschow at al., 1991; 1992; Sparks, 1995a; 1995b; Sparks at al., 1998; Sparks & Ganschow, 1991; 1993a; 1993b; 1993c; 1993d) to examine their hypothesis and concluded that:

> Empirical evidence has been generated to support the positions that foreign language learning performance is related to native language learning, that most poor foreign language learners have overt or subtle problems with the phonology and orthography (and syntactic) components of language, that affective differences are likely to be a consequence of successful or unsuccessful foreign language learning (Ganschow, Sparks, & Javorsky, 1998, p.254).

However, most of these findings of both types of studies –either with a native and/or foreign language learning were conducted on those whose native language was English and/or when they were learning other Indo-European languages. Little is known, however, about the relationship between basic language skills and foreign language learning, especially for Japanese learners of English as a second language. This particular relationship (phonological skills, reading and foreign language learning aptitude) may apply only for those with English or Western languages, because Japanese language is so different from Indo-European languages in terms of learning patterns and a writing system (Benjamin, 1997; Sakuma, Sasanuma, Tatsumi, & Masaki, 1998; Wydell, Patterson & Humphreys, 1993;).

Benjamin (1997) hypothesizes that if you learn to read English as your native language, learning to read English is harder than learning

Benjamin (1997) hypothesizes that if you learn to read English as your native language, learning to read English is harder than learning Japanese as your native language at the beginning and becomes easier at the end. On the other hand, if you learn to read Japanese as your native language is easy at the beginning but becomes more difficult and remains that way longer. This is because, as Benjamin notes, English has a writing system in which there are so many irregular spellings and sounds that must be memorized. In Japanese, on the other hand, there are three main types of written characters: *Hiragana, Katakana and Kanji* or Chinese characters that seem to have fewer irregular spellings and sounds than English. Hiragana evolved through the simplification of Chinese characters, and is used for function words (such as in, at and on), inflectional endings and the words with Japanese origin (Hatasa & Hatasa, 1998). Katakana is used for loan words from other language such as computer and taxi. Although Hiragana and Katakana are somewhat related to the alphabetic principle of each sounds being represented by a symbol, they represent each syllable by a symbol, because syllable formation in Japanese is very limited. A syllable can be a vowel alone or a consonant followed by a vowel, or a nasal consonant alone. It is also called a syllabury (Table 1). In Japanese, there are only five vowel sounds. 1) *a* is similar to 'ah' but shorter. 2)*i* is similar to the sound in "we" but shorter. 3) *u* is similar to the sound in 'ooh' but shorter. 4) *e* is similar to the first vowel sound in "exercise." 5) *o* similar to the sound in 'on' with British accent (Makino, Hatasa & Hatasa, 1998). All other Hiragana and Katakana characters (except ん, a nasal consonant) are a combination of a consonant followed by a vowel. For example, Hiragana け (ke) has a consonant *k* + vowel *e*.

Figure 1.　Japanese Hiragana

| Vowel | a | k | s | t | n | h | m | y | r | w | n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a | あ | か | さ | た | な | は | ま | や | ら | わ | ん |
| i | い | き | し | ち | に | ひ | み | | り | | |
| u | う | く | す | つ | ぬ | ふ | む | ゆ | る | | |
| e | え | け | せ | て | ね | へ | め | | れ | | |
| o | お | こ | そ | と | の | ほ | も | よ | ろ | を | |

**Example:**か : k ＋a＝ k a

A Katakana table is identical to Hiragana but uses different characters for loan words (table 2).

Figure 2.　Japanese Katakana

| Vowel | a | k | s | t | n | h | m | y | r | w | n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| a | ア | カ | サ | タ | ナ | ハ | マ | ヤ | ラ | | ン |
| i | イ | キ | シ | チ | ニ | ヒ | ミ | | リ | | |
| u | ウ | ク | ス | ツ | ヌ | フ | ム | ユ | ル | | |
| e | エ | ケ | セ | テ | ネ | ヘ | メ | | レ | | |
| o | オ | コ | ソ | ト | ノ | ホ | モ | ヨ | ロ | ヲ | |

Compared to English, the correspondences between letter and sounds are simple and regular, and these sets of syllabic symbol enable Japanese first graders or beginners of Japanese to learn how to read more quickly and with fewer difficulties (Sakuma et al., 1998; Stevenson, Stigler, Lucker, & Lee, 1982), especially because the textbooks for beginners or first graders used at school are mostly written by Hiragana and Katakana (Stevenson at al., 1982).　Even

though any texts can be written in these syllabic characters, Chinese characters are also commonly used by Japanese. In general, Hiragana and Katakana can be used only for: 1) grammatical morphemes and function words such as the inflections that Japanese grammar needs of its words (Hiragana); 2) loan noun words (Katakana) (Benjamin, 1997; Sakuma et al., 1998). Most Japanese texts are represented by Kanji, meaning "Chinese writing. (Figure 1)"

**Figure 3**
**Example of Regular Japanese Reading**

| **Black: Hiragana** | *Italic: Katakana* | <u>Underline: Kanji (Chinese)</u> |

ところが<u>現実</u>というものは、<u>理想</u>や<u>観念</u>の<u>尺度</u>に、きちんと<u>合</u>うことはありえない。すると、ここが<u>悪</u>い、あそこが<u>悪</u>いとなり、<u>失望</u>が<u>重</u>なって、<u>不平不満</u>だらけになってしまう。それは、たとえば、<u>桜</u>の<u>木</u>を<u>基準</u>に<u>梅</u>の<u>木</u>を<u>見</u>て、これは<u>変</u>な<u>桜</u>だと<u>言</u>って、<u>落胆</u>しているようなものでしょう。むしろ、こうでなくてはならないという、<u>頭</u>のなかで<u>作り上</u>げた<u>基準</u>にこだわらず、もっと<u>自由</u>にものを<u>見</u>るべきです。*テヘラン*での<u>生活</u>は、<u>慣</u>れないために、<u>確</u>かに<u>大変</u>な<u>面</u>もあると<u>思</u>います。でも、<u>多</u>かれ、<u>少</u>なかれ、どこにいても、<u>大変</u>なことや、いやなことはあります。それは、どんな<u>生活環境</u>でも、どんな<u>人間</u>でも<u>同</u>じです。<u>百</u>*パーセント*すばらしい<u>環境</u>もなければ、そんな<u>人間</u>もいません。あなたが<u>基準</u>とすべきは<u>日本</u>の<u>暮</u>らしではなく、ここでの<u>生活</u>です。

(Sited from the novel "Human Revolution," Daisaku Ikeda, 1999. Seikyo Shuppan.)

Kanji was imported from China and its correspondences between each character and sound are highly complex compared to the other two Japanese types of characters (Sakuma et al., 1998; Wydell et al., 1993). Also, the number of Kanji is very large. Japanese children are taught Hiragana and Katakana for the first half of first grade and the number of Kanji introduced are gradually increased, and by the end of middle school, 1850 Kanji are introduced (Stevenson et al., 1982). Unlike Chinese, most of Japanese Kanji can be read in two ways: "ON" Chinese reading and "KUN" Japanese reading, and the vast majority of words in Japanese are made up of two or more Kanji (Table 2).

**Table 1**[1]

**Example of Single Kanji Words and Two-Kanji-Character Words Containing Those as Component Characters**

|  | Kanji1 | Kanji2 | Kanji3 | WordA | WordB |
|---|---|---|---|---|---|
| **Kanji Word** | 指 | 輪 | 車 | 指輪 | 車輪 |
| Translation | finger | circle | vehicle | ring | wheel |
| Pronunciation (kun) | yubi | wa | kuruma | yubi-wa | -- |
| (on) | shi | rin | sya | -- | sya-rin |

Sukuma et al. (1998) explains ON and KUN reading in Kanji:

The KUN reading is usually used for a single Kanji character occurring in isolation as a word and for a small set of multi-Kanji character words. The ON-reading, on the other hand, is used for most multi-Kanji character words. Although there is a strong tendency to pair the same reading type (ON-ON or KUN-KUN) rather than to use the mixed-reading type (KUN-ON, or ON-KUN), no rules exist for determining which reading type should be used.

Even though these complexities of the pronunciation of Chinese characters for Japanese, some scholars such as Liberman, Gleitman and Rozin (1977) and Martin (1973) hypothesized that it was easier to learn reading Japanese and Chinese because the syllabic characters of Japanese Kana sounds and symbols were so regular and consistent, and the ideographic Chinese characters also provided the possibilities of concrete, whole meaningful units. Thus, learning to read Chinese characters may depend more on memory and perceptual skills. Stevenson et al. (1982) conducted a study to examine reading abilities of fifth graders in Taiwan, Japan, and the United States. Children in the three countries were given reading tasks (vocabulary, reading texts, and

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[1] The table is sited from the article Sakuma at al., 1997, p 76

comprehension of the texts).   Stevenson et al. found the existence of reading disabilities among Chinese and Japanese children as well as among children in the U.S.. Not many cases of reading disabilities had been reported in Japan and Taiwan because, Stevenson et al. believes, poor performance in reading is considered to be a problem of students' motivation (they do not study hard enough) and/or teaching skills. Furthermore, some Chinese characters combine to make many more thousand of words and the combinations of these words are not meaningfully interrelated (table 4).   Therefore, learning Japanese Kana and Chinese characters will be as hard and complex as learning the English alphabet.

The aim of this study was to examine the relationship between the basic language coding skills in Japanese (native language) and that of English (foreign language) among Japanese learners of English as a foreign language.   The basic language coding skills were: 1) phonology - understanding the association of sounds with letters.   2) orthography - understanding the rules of correct spelling (the association of sounds and prints).   3) syntax (grammatical sensitivity) - understanding how to put the words together to form phrases, clauses, or sentences.   In other words, as Ganschow & Sparks (1998) note, to examine the question of whether the problems of basic language coding skills in one language (foreign or native language) have negative influences on the basic language coding skills in spite of the language differences between Japanese and English.

**Table 2**

**Example of Kanji Words with a combination of Unrelated Characters**

|  | Kanji1 | Kanji2 | Kanji3 | WordA |
|---|---|---|---|---|
| Kanji Word 1 | 寿 | 司 |  | 寿司 |
| Translation | congratu-lations | official |  | sushi (food) |
| Kanji word 2 | 面 | 白 |  | 面白 |
| Translation | face/mask | white |  | interesting |
| Kanji word 3 | 八 | 百 | 長 | 八百長 |
| Translation | eight | a hundred | long/chief | faked game |

## Methods

*Participants*

Forty-eight Japanese learners of English as a second language were chosen. The participants' ages were between 18 to 45, and 26 males 22 females. 37.5% of the participants (18) were living in Vancouver, Canada at the time of this study, and had been learning English as a second language at school or used English in their daily lives even though they mainly spoke Japanese at home. The other 62.5% (30) were living in two of the largest cities of Japan, Osaka and Tokyo, at the time of this study, but had also been learning English as a second language at school, by themselves, or had used English on daily basis (such as English teachers, employees at trading companies. etc.). Participants were assessed with word identification tasks in Japanese and English. Participants who scored less than 80 (the lowest 30% of scores) on this reading tasks in Japanese were categorized as "poor readers of Japanese" and therefore, possibly at-risk learners of English. The rest of the participants (70%) who scored more than 80 were categorized as "average readers of Japanese." The first reading task in Japanese was used to categorize

participants into the poor readers and average readers groups because people with foreign language learning problems are more likely to have problems with basic language coding skills in their native language (e.g. Ganschow & Sparks). There were twelve participants (7 males and 5 females) in the group of poor readers, and were thirty-six participants (17 males and 19 females) in the group of average readers. The mean scores of each category –phonology, orthography, and syntax – in English and Japanese were compared between groups.

*Materials and Procedure*

Each participant was examined individually by one male experimenter in relaxed and quiet environment. The tasks in English were administered after the completion of the tasks in Japanese. The tasks in English were designed to examine the participants' basic language coding skills, phonological, orthographic, and syntactic skills. The word identification and word attack tasks in English were the subtests of Woodcock Reading Mastery Test-Revised (Woodcock, 1987) and the other two tests in English- were designed to examine orthographic and syntactic skills (Siegel, Share, & Geva, 1995; Siegel & Ryan, 1988). The Woodcock was a standardized test and two other tasks in English were not. The tasks in Japanese were developed by Shuko Saito and the author, and were also designed to examine the participants' basic language coding skills, phonological, orthographic, and syntactic skills, but were not directly translated into Japanese because of the language and cultural differences. All of the tasks in Japanese were not standardized. Each task contains practice and experimental trials. The experimenter did not start the experimental trial until the participants fully understood what they should do for each task. The order of presentation was: word identification, word attack, oral cloze, and orthographic tasks in Japanese followed by word identification, word attack, oral cloze, and orthographic tasks in English. The word identification task in Japanese was used to divide participants into two groups: poor readers and average readers of Japanese. For the second analysis, the word identification in English was used to divide the participants into two groups: very poor readers and poor readers. The tasks were as follows:

*Tasks in Japanese*

Word Identification

First, the participants were given a paper. Ten words are printed on the first page, and these were for the practice trials. They were told to read aloud the words from the top to the bottom. When the participants fully understood the task, they are told to turn over the next page. In the experimental task, each page had ten characters and participants were told to read aloud from the top to the bottom and go on to the next page when they finished. The participants were also encouraged to guess if they were not sure of the answer. No feedback was given for the experimental tasks. When the participants made six mistakes consecutively, the task was stopped. The reading test contains one hundred words. The first ten words are all in Hiragana. The next ten words are in Katakana (loan words), and the rest of the words are in Kanji alone (three one-character words, fifty two-character words, thirteen three-character words, and ten four-character words) or the combination of Kanji and Hiragana (four combined word). These words were chosen to attempt to match the tasks in English in terms of difficulty. This task contained a series of words, so it was also a test of word recognition skills.

Word Attack

The word attack contained 38 pronounceable nonwords such as あろり (ten words in Hiragana)、ホコネ(ten words in katakana)、and 袋荘 (eighteen words in kanji). The procedures and directions to the participants for this task were the same as in the first reading test, but there are six words on each page.

Oral Cloze

This task contained twenty sentences that were read aloud to the participants. One word was missing for each sentence. The missing words varied and were nouns, verbs, pronouns, particles, prepositions, adverbs, adjectives, and conjunctions. In the practice trial, the following direction from the experimenter was read aloud:

私がある文を読みますが、それはどこか言葉がかけています。その欠けている所では「かっこ」といいます。その「かっこ」の所にどんな言葉が入るかを考えて下さい。例えば私が、次のようにいいます。「月は（かっこ）に明るく輝く。」（少し間をおいて、もう一度繰り返す。）答えは、空とか夜ですね。「月は空に明るく輝く。」となります。それでは、次の練習をしてみましょう。「子供達がおもちゃで（かっこ）。」（少し間をおいて、もう一度繰り返す。）かっこの中に何がはいりますか？（もし、子供が答えられなかったら、「遊んでいます、はどうでしょう。」と言う。）子供達がおもちゃで遊んでいます。」となります。それでは、もう一つ練習してみましょう。「子犬が（かっこ）をふっています。」（間の後、繰り返し。）よくできました。質問はありませんか。それでは、始めましょう。

Translation

I will read one sentence to you, but a word is missing. Where the word is missing, I will say "kakko (blank)." Please think of a word that you can put in the blank. For example, I will say "The moon shines bright _____ (pause and repeat). The answer will be in the sky or at night. Right? Then, it would be "The moon shines bright in the sky." Let's do the next one. "Children _____ with toys (pause and repeat). What can you put in the blank? (If the participants can not respond, say "How about play?) Then it would be "Children play with toys." Let's do one more practice. "The little puppy wags its _____." (pause and repeat). Good job. Do you have any questions? OK. Let's begin.

The practice trial continued until the participants fully understood the task. In the experimental trial, when the participants did not seem to hear well or misunderstood the sentence, the sentences would be repeated again (not more than three times), and they were also encouraged to guess if they were not sure of the answer. The participants received a point if the words in which they filled the blank were appropriate or made sense as one sentence. Therefore, this is a test to examine syntactic skills of participants.

Orthographic task

In this task, the participants were shown the seventeen pairs of nonwords that were printed on one sheet of paper. The participants were asked to guess which word in each pair looks more like a real word. The task has

seventeen pairs of pseudo-Kanji (Chinese characters). Benjamin (1998) notes that some Chinese characters are derived only from pictographic symbols such as *river* 川 (can be seen as a drawing of ripples of water), 木 *tree,* but many Kanji are formed by pictures of meaning elements of the word (with many morphemes). For example, "the kanji meaning male, 男 is made up of 田, a drawing of fields divided by irrigation dikes, over a drawing of a knife 刀. Men work in fields and use knives or swords (Benjamin, pp.246-47)." Even though there is no rule to specify the place of these morphemes (for example, 田 can be used at any places: at the top 男、果; the right-hand side 畑; 細; at the bottom 畠、畜; at the left-hand side 略、畦 ), many morphemes have some patterns. For the example of the orthographic tasks in Japanese, question number thirteen: 見日 , 日毎 The key element for this question will be a place of 日 with either the other morpheme 見 *see* or 毎 *every.* Then, 日 should be on either right or left-hand side. 日 means the sun which was derived from the drawing of the sun, so 日 is frequently used for one part of kanji meaning of something related to the sun or a day such as 明 *bright, clear,* 暗 *dark,* 時 *time,* 昨日 *yester – day,* 曜 *a day of the week.* Also, 日 is rarely used at right-hand side as a morpheme, and 毎 (every) is more closely related to the day 日 (*every-day*) than 見 (*look-day*). Then, the answer is          . For this task, the participants had to guess the one that "looks-like-a-real" Chinese character. 日毎

*Tasks in English*

<u>Word Identification</u>

The reading tasks in English were from the Woodcock Reading Mastery Test - Revised; it is a standardized test. The Word Identification test in English contains one hundred six words. This task contained a series of words, so it was also a test of word recognition skills. First, the participants were given a sheet of paper. Ten words are printed on the first page, and these were for the practice trials. They were told to read aloud the words from the top to the bottom. When the participants fully understood the task, they are told to turn over the next page for the experimental tasks. In experimental tasks, each page had ten characters and participants were told to read aloud from the top to the bottom and go on to the next page when they finished. The participants

were also encouraged to guess if they were not sure of the answer. No feedback was given for the experimental trial. When the participants made six mistakes consecutively, the task was stopped.

## Word Attack

The Word Attack task in English was from the Woodcock Reading Mastery Test - Revised; it is also a standardized test. The Word Attack contained 45 pronounceable nonwords such as gat, straced, and pnomocher. The procedures and directions to the participants for this task were the same as in the first reading test, but there are six words on each page.

## Oral Cloze

The Oral Cloze task in English was designed by Seigel & Ryan (1988); it is not a standardized test. This task contained twenty sentences that read aloud to the participants. One word was missing for each sentence. The missing words varied and were nouns, verbs, pronouns, particles, prepositions, adverbs, adjectives, and conjunctions. In the practice trial, the following direction from the experimenter was read aloud:

"This time I will read something to you and there will be a word missing. Where the word is missing, I will say "blank". I want you to think of a word that would sound right in the blank. For example, I might say "The moon shines bright in the _____." (pause and repeat) and I want you to say "sky". So, it would be "The moon shines bright in the sky." O.K. let's try another one. I'll say "The children _____ with the toys." (pause and repeat). What's the missing word? (if the participant fails to respond, say "How about, play? Then it would be "The children play with the toys." Let's try another one. "The little puppy wags its _____." (pause and repeat). Good!
As for the description and direction of the practice trials and experimental trial were the same as the oral cloze task in Japanese, but the author must note that this is also a test to examine syntactic skills of participants in English.
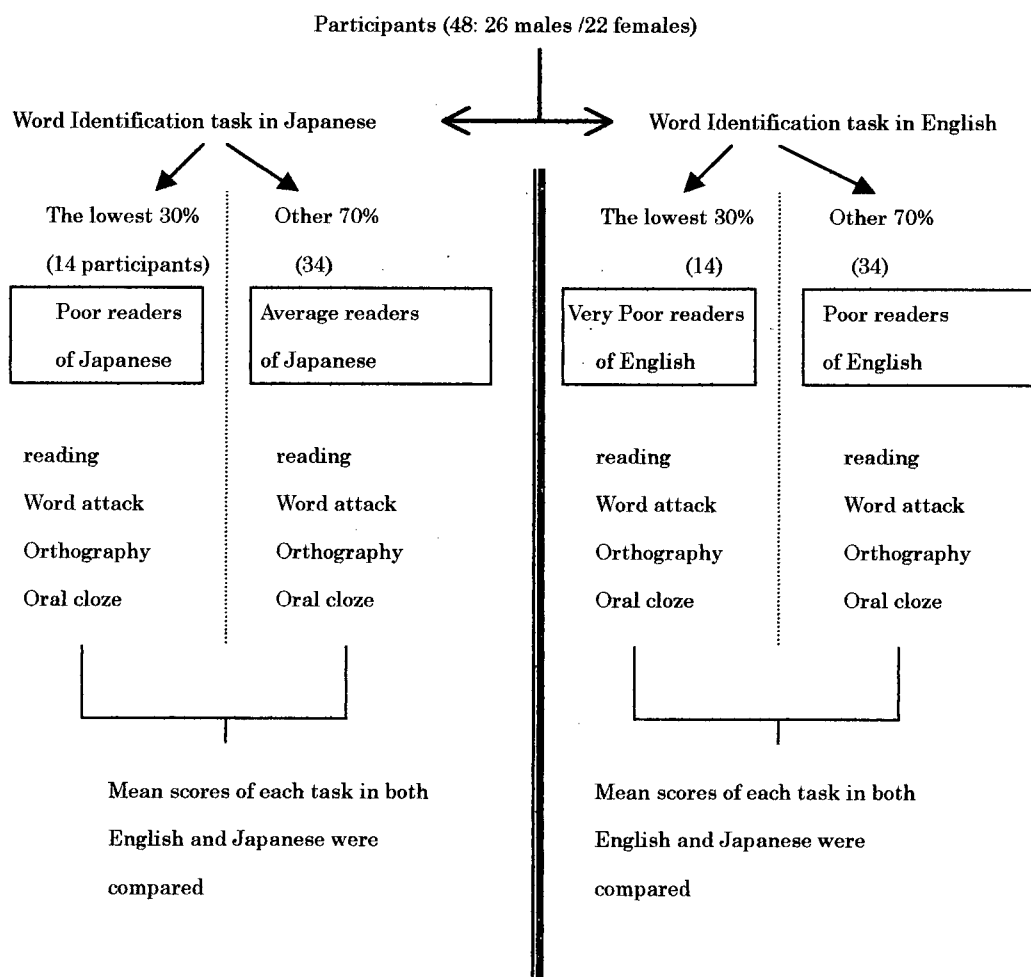
## Orthographic task

The orthographic tasks in English were designed by Siegel, Share, & Geva (1995); it is not a standardized test as well. In this task, the participants were shown the seventeen pairs of nonwords that were printed on one sheet of paper. The participants were asked to guess which word in each pair looks more like a real word. The task has seventeen pairs of pseudo-words such as moke-moje, dlun-lund, and powl-lowp.

## Second Analysis

In the second part of this study, the participants were divided into the two groups -very poor and poor readers of English based on the scores of the word identification tasks in English (the subtest of Woodcock Reading Mastery Test - Revised;it is a standardized test)(figure 2). The participants who scored less than 56 (the lowest 30% of scores) on this reading tasks in English were categorized as "very poor readers of English." The rest of the participants (70%) who scored more than 57 were categorized as "poor readers of English." Therefore, there was no "average readers of English" because all of the participants had standard scores below 84 which was lower than the average score of native English speakers. It would be appropriate to label the poor readers in this study as "very poor readers of English" and average readers as "poor reader of English." 50% of the participants (seven) who were categorized as very poor readers of English were also categorized as poor readers of Japanese. The other 50% (seven) were categorized as average readers of Japanese but very poor readers of English

## Figure 4. The procedures of dividing participants into the groups

Participants (48: 26 males /22 females)

| Word Identification task in Japanese | | Word Identification task in English | |
|---|---|---|---|
| The lowest 30% | Other 70% | The lowest 30% | Other 70% |
| (14 participants) | (34) | (14) | (34) |
| Poor readers of Japanese | Average readers of Japanese | Very Poor readers of English | Poor readers of English |
| reading | reading | reading | reading |
| Word attack | Word attack | Word attack | Word attack |
| Orthography | Orthography | Orthography | Orthography |
| Oral cloze | Oral cloze | Oral cloze | Oral cloze |

Mean scores of each task in both English and Japanese were compared

Mean scores of each task in both English and Japanese were compared

# Results

Independent sample T-test on SPSS was used to examine the mean scores of readers for all of the tasks in both Japanese and English.   Table 5a(English) and 5b (Japanese) show mean scores of poor and average readers of Japanese for each task in both languages.

Table 3a.  The mean scores of each task <u>in English</u>

| Japanese Level | Word Identification* | Word Attack* | Orthography | Oral Cloze |
|---|---|---|---|---|
| Poor Readers (SD) | 52.50 (15.71) | 79.43 (14.76) | 13.00 (1.47) | 9.93 (4.84) |
| Average Readers (SD) | 65.76 (12.08) | 93.03 (9.75) | 14.15 (1.97) | 12.91 (3.39) |
| Sig. (2 tailed) | .008 | .013 | .034 | .019 |

*Standard scores

Table 3b.  The mean scores of each task <u>in Japanese</u>

| Japanese Level | Word Identification | Word Attack | Orthography | Oral Cloze |
|---|---|---|---|---|
| Poor Readers (SD) | 75.57 (3.30) | 32.00 (2.66) | 15.07 (1.94) | 18.36 (1.28) |
| Average Readers (SD) | 85.50 (4.08) | 34.26 (3.19) | 15.71 (1.59) | 19.29 (.80) |
| Sig. (2 tailed) | >.001 | .024 | .244 | .004 |

*Word Identification*

The lowest score of the word identification in Japanese was 70 and the highest score was 93. There were fourteen participants in the group of poor readers and they had the lowest 30% of scores in the word identification in Japanese.   Also, there were thirty-four participants in the average readers with other 70% scores.

The word identification task in Japanese was used to divide the participants into two groups: poor readers and average readers. There are fourteen participants categorized as poor readers of Japanese because they scored less than 80 on the word identification in Japanese, and the other 34, who scored more than 80 were categorized as average readers of Japanese. As it shows at Table 5a and b, the mean scores of poor readers of Japanese in the English tasks (in the Japanese tasks) were 52.50 (75.75) and 65.76 (85.85) for the average readers.

Independent t-tests were conducted on the mean scores of the word identification tasks in English and Japanese for the two groups and the following results were obtained: English $t(46)= 3.163$, $p<.01$; Japanese $t(46) = 8.073$, $p<.001$. It reveals that there were significant differences between two groups. It clearly shows that the poor readers of Japanese performed more poorly than the average readers of Japanese on the reading tasks in both languages.

*Word Attack*
As it shows in Table 5a and b., independent t-test showed the results as follows: English $t(46) = 2.770$, $p<.01$; Japanese $t(46)= 2.336$, $p<.05$. It shows that there were significant differences between both groups on the word attack tasks.

*Oral Cloze*
As is shown in Table 5a and b., the average readers scored significantly higher than the poor readers did on the tasks in English and in Japanese. Independent t-test was conducted and the results were as follows: English $t(46)= 2.437$ , $p<.05$; Japanese $t(46)= 3.078$, $p<.01$.

*Orthographic task*
As it shows in Table 5a and b., the average readers scored significantly higher than the poor readers on the tasks in English but not in Japanese. Independent t-test was conducted and the results were as follows: English $t(46)= 2.215$, $p<.05$; Japanese $t(46)= 1.179$, $p<.1$. It shows that there was

significant difference between both groups on the orthographic tasks in English but no difference in Japanese. It seems that there were no significant findings on orthographic tasks in Japanese.

Next, the participants were divided into the groups of very poor or poor readers of English based on the scores of word identification task in English. There were also fourteen participants who were categorized as very poor readers of English with the standard scores less than 56 and thirty-four participants as poor readers with the standard scores more than 57. A half of the participants (seven) in the group of very poor readers of English were also categorized as poor readers of Japanese in the prior analysis. Table 7a(English) and b (Japanese) shows mean scores of each task in both languages.

Table 4a.  The mean scores of each task in English

| English Level | Word Identification* | Word Attack* | Orthography | Oral Cloze |
|---|---|---|---|---|
| Very Poor Readers (SD) | 43.00 (9.11) | 80.29 (8.61) | 12.14 (1.23) | 9.00 (3.21) |
| Poor Readers (SD) | 69.68 (7.03) | 92.68 (3.04) | 14.50 (1.69) | 13.29 (3.71) |
| Sig. (2 tailed) | >.001 | .016 | >.001 | > .001 |

*Standard scores

Table 4b.   The mean scores of each task in Japanese

| English Level | Word Identification | Word Attack | Orthography | Oral Cloze |
|---|---|---|---|---|
| Very Poor Readers | 79.14 | 31.86 | 15.07 | 18.64 |
| (SD) | (4.99) | (4.17) | (1.98) | (1.28) |
| Poor Readers | 84.03 | 34.32 | 15.71 | 19.18 |
| (SD) | (5.79) | (2.42) | (1.57) | (.90) |
| Sig. (2 tailed) | .008 | .013 | .244 | .107 |

*Word Identification*

Independent t-tests were conducted on the mean scores of the word identification in English and Japanese between both groups and the following results were obtained: English $t(46)= 10.946$, $p<.001$; Japanese $t(46) = 2.759$, $p<.01$.   It reveals that there were significant differences between two groups.   It also shows that the very poor readers performed more poorly than the poor readers on the word identification.

*Word Attack*

The following results were obtained: English $t(46) = 22.489$, $p<.05$; Japanese $t(46)= 2.573$, $p<.05$.   It also shows that there were significant differences between both groups on the word attack tasks.   The very poor readers scored significantly lower than the poor readers on the word attack tasks.

*Oral Cloze*

The results were as follows: English $t(46)= 3.779$ , $p<.001$; Japanese $t(46)= 1.642$, $p>1$.   It shows that the poor readers scored significantly higher than the very poor readers on the tasks in English but the results in Japanese were not significant.

*Orthographic task*

As it shows in Table 6a and b., the poor readers scored significantly higher than the very poor readers on the tasks in English but not in Japanese: English $\underline{t}(46)= 4.711$, $\underline{p}>.001$; Japanese $\underline{t}(46)= 1.179$, $\underline{p}>1$. It shows that there was significant difference between both groups on the orthographic tasks in English but no significant differences in Japanese.

# Discussion

The aim of this study was to examine the relationship between the basic language coding skills (phonology, orthography, and syntax) in Japanese (native language) and that of in English (foreign language) among Japanese learners of English as a foreign language. In other words, whether the problems of basic language coding skills such as phonology, orthography and syntax in Japanese (native language) have influences on the basic language coding skills in English in spite of language differences between Japanese and English. This study was also designed to examine Ganschow and Sparks' findings that successful foreign language learners significantly stronger native language skills on measures of basic language processing skills than unsuccessful foreign language learners (1991).

Almost all tasks in both languages showed significant differences between the groups categorized on the basis of word identification task in Japanese and the groups categorized on the basis of word identification task in English. The higher groups (higher 70%: average readers of Japanese and poor readers of English) and the lower groups (lower 30%: the poor readers of Japanese and very poor readers of English). On the word identification tasks in both languages, there were significant differences between the higher and lower groups. On the word attack tasks in both languages, there were also significant differences between two groups. The higher groups had significantly higher score than the lower groups on the task in both English and Japanese. On the oral cloze task, the higher groups scored significantly higher than the lower groups on the tasks in English but there was no difference in Japanese.

On the orthographic tasks in English, the higher groups showed significantly higher scores than the lower groups , but there was no difference on the tasks in Japanese.

Ganschow and Sparks (1997) suggested that the best predictor of overall foreign language proficiency were basic language coding skills such as phonology, orthography, and syntax. Koda (1992) also reported that "lower level verbal processing skills (i.e. phonology, orthography) are important for foreign language proficiency, and many other researchers also suggested the importance of basic language coding skills in a native language to learn a foreign language. In this study, the results seemed to support their positions that foreign language performance is strongly related to language learning, especially, that poor foreign language learners have problems with phonological, orthographic and syntactic aspects of language in spite of the different nature of English and Japanese. This finding seems to be very important for Japanese learners of English as a second language, because these basic language coding skills, especially phonology, are not being taught explicitly in Japanese schools. Most of the English teachers are focusing on grammatical rules and translation skills from English to Japanese. The students with foreign language learning problems, therefore, are still in traditional classrooms and are forced to learn grammar and how to translate despite the lack of basic language coding skills which will be fundamental for foreign language learning. A special program to teach basic language coding skills in both English and Japanese, especially for those with foreign language learning problems is required in Japan. The author should also mention that there seemed to have some problems that might yield better results for future study. First, all of the participants in this study had very low scores on the tasks in English, especially word identification task, but it was not surprising at all because we can not compare the participants (native Japanese speakers) with native English speakers.

Secondly, the college-educated people were chosen to participate for this study because participants must be able to do the tasks in English as well as in Japanese. Two of the participants who were college students in

Japan withdrew from the study because the tasks in English were too difficult. In Japan, everybody must learn English for three years in compulsory education (Many elementary schools have just started English lessons in the year of 2000), six years if they go to high school, and nine years for college students. However, in addition to basic language coding skills, conversational skills such as speaking and understanding have hardly been taught in the classrooms. Thus, it seems to be very difficult for ordinary Japanese to do any tasks using untrained conversational (verbal) skills in English.

Thirdly, the differences between average and poor readers of Japanese on the orthographic tasks in Japanese and between very poor and poor readers of English in the orthographic and oral cloze tasks in Japanese were not significant. Compared to other tasks, the orthographic task in Japanese was hand-written because of a technical problem creating a task in pseudo-Kanji characters because it is ideographic. (Figure 2). If it were printed in print letters, the results might be different.

**Figure 5.**
**Examples of the orthographic tasks in Japanese (handwritten).**
**and real Kanji letters (print).  Both sides represent the same**
**morphemes.**

之 之

× メ

也 也

彦 顔

良 朗

In this study, the importance of basic coding skills (especially phonological and syntactic skills) was confirmed in order to learn a foreign language

despite the differences of language nature between Japanese and English. Then, it is clear to recognize that the importance of these basic skills to learn foreign languages.

For ESL education in Japan to help students with foreign language learning problems, there are some problems to be considered for instructors: 1) What and how do instructors teach English and Japanese basic language coding skills that will be proper and suited for Japanese students? 2) How and who will train ESL instructors to teach these skills? 3) While passing entrance exams is essential for students' future careers in Japan, can a special program to teach basic language coding skills meet the need of students passing the exams?   In Japan, there seem to be many important matters and concerns to bring proper foreign language education for those with learning problems, but the findings of this study will be an important first step for all ESL learners and instructors.

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