

Factors Constituting Reading Ability of Japanese EFL Learners

Naoya HASE

I. Introduction

According to Grabe and Stoller (2002), “we actually know relatively little about how people become good L2 (second language) readers, but we do know that there are significant differences between learning to read in L1 (first language) and L2 settings” (p. 2). That is to say, learning to read L2 is different from learning to read L1. They also state that “far more research has been carried out on reading in L1 contexts (especially in English as an L1) than in L2 contexts” (p. 10). Although many of the research findings in L1 contexts could possibly be applied to L2 contexts as well, due consideration needs to be given to L2 reading and its instruction, especially the one to speakers who are learning to read L2 that is linguistically distant from their L1. This is because those learners may very well experience difficulties unique to them, resulting from huge and various linguistic differences that lie between the two languages. Japanese EFL learners fall into this category. This paper will explore what constitutes reading ability of Japanese EFL learners and what the effective reading instruction to them should entail by focusing on the unique features of Japanese EFL learners.

II. What is reading?

Simply put, “reading can be thought of as a way to draw information from a text and to form an interpretation of that information” (Grabe and Stoller, 2002, p. 4). However, this definition does not really tell us much about what actually happens in our head and how a text gets comprehended when we read it. In order to find out more about the process of reading and reading comprehension, we need to look at two different models of reading.

1. Bottom-up models

“Bottom-up models suggest that all reading follows a mechanical pattern in which the reader creates a piece-by-piece mental translation of the information in the text, with little interference from the reader’s own background knowledge. In the extreme view, the reader processes each word letter-by-letter, each sentence word-by-word and each text sentence-by-sentence in a linear fashion” (Grabe and Stoller, 2002, p. 32). Bottom-up models emphasize what is known as lower-level reading processes. Segalowitz, Poulsen & Komoda (1991) indicate that “these lower-level processes consist of word recognition and include visual

recognition of letter features, letter identification, the generation of grapheme-phoneme correspondence, utilization of orthographic redundancies such as regularities in letter sequences, the association of words to their semantic representations, possibly the identification of basic syntactic structures within the portion of text currently being read, and with the generation of propositional units” (p. 17).

2. Top-down models

“Top-down models characterise the reader as someone who has a set of expectations about text information and samples enough information from the text to confirm or reject these expectations (Grabe and Stoller, 2002, p. 32). Top-down models “all have in common a viewing of the fluent reader as being actively engaged in hypothesis testing as he proceeds through the text” (Stanovich, 1980, p. 34). In top-down models, “higher level processes...direct the flow of information through lower-level processes” (ibid.). Segalowitz, Poulsen, and Komoda (1991) point out that this “higher level is concerned primarily with integration of textual information and includes resolving ambiguities in the text, linking words with their co-references, integrating propositional units across sentences, generating and updating a schema or representation of the text as whole, and integrating textual information with prior knowledge” (p. 17).

To sum up, according to the bottom-up models, the process of reading has more to do with a lower-level or linguistic processing such as word recognition and syntactic parsing, and the top-down models indicate that a higher-level processing such as inferencing and predicting has a more important role to play in the process of reading.

III. What constitutes reading ability?

Now that we have seen that reading involves two different cognitive processes, we would like to consider what constitutes reading ability.

1. Reading ability as a higher-level cognitive skill

As we have seen in the top-down models, reading involves a higher-level cognitive skill (henceforth reading skill) such as predicting and inferencing. Moreover, this reading skill is not unique to any particular language; it is not language-specific. In other words, reading skill is universal and transcends language differences. In fact, Cummins (1979, 1991) has advocated the hypothesis of linguistic interdependence which suggests that once reading ability has been acquired in the first language, it is available for use in the second or subsequent languages also. Once it is learned, it does not need to be relearned.

2. Reading ability as a language proficiency

According to the bottom-up models discussed above, reading depends on linguistic

processing abilities such as word recognition and syntactic parsing. This means that besides a higher-level cognitive problem-solving ability, a certain level of the knowledge of a language and the ability to process it (henceforth language proficiency) is crucial to successful reading. In order to make out the text, the reader needs to have a sufficient level of language proficiency, or lower-level linguistic processing ability for that language. The success of reading depends on the linguistic knowledge that the reader has and his or her ability to process it.

By the way, language proficiency or the knowledge of a given language and the ability required to process it for successful reading should be the same for any reader with any language background; it is determined by that language. Some languages are simply easier to learn, others not, due to linguistic features of that particular language such as orthography, grammar, pronunciation, syntactic structures and so on. Frost (2005) says that “proficient reading is shaped by the structure of the language and its orthographic system” (p. 272). In other words, it is the language itself that decides what it takes to be a proficient reader of that language, not the ability of the reader. The extra difficulty arises only when a reader who is trying to learn L2 comes up against an extra barrier that L2 presents, and this barrier is even greater if L1 and L2 are linguistically distant from each other. The reader simply has a longer distance to travel in order to attain a decent level of proficiency in L2. This will be discussed in the following section.

3. Constituents of reading ability

As we have seen so far, reading ability is composed of reading skill and language proficiency. The reading skill is universal and not language-specific. On the other hand, language proficiency is language-specific and has a lot to do with the linguistic features of each language.

This concept can be expressed by the following triangle. Since reading skill is the same across languages, it forms apex A. Whereas line segment BC represents the variety of proficiency that each language represents. For example, let's say that the reading ability of one language (let's call this language B, for convenience' sake) can be expressed by line segment AB and that of another language (Language C) can be expressed by line segment AC. The proficiency of the two languages is described as a continuum with reading skill at one end and language proficiency at the other. Now, Language B and Language C are different from each other in many aspects; that is to say, there is a linguistic distance between these two languages, and that distance is represented by the length of line segment BC. The longer the distance, the more different the two languages are. But since reading skill is the same for any language, apex A is shared by both languages. Line segment BC also represents the distance that a learner whose L1 is B has to travel to learn Language C; that is, the language barrier he or she has to overcome in order to learn Language C. Further, the fact that reading skill is at the top and language proficiency at the bottom indicates that language proficiency serves as the foundation of reading ability as a

whole and reading skill cannot be exercised efficiently without the solid foundation of language proficiency.

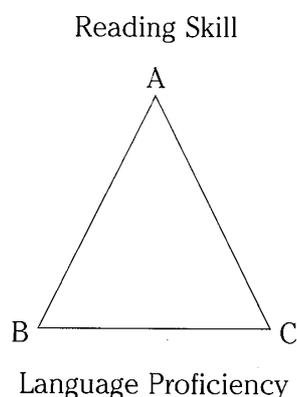


Figure 1. Constituents of Reading Ability

So far, we have seen that reading ability consists of two factors: reading skill and language proficiency. We have also discussed that the former is universal and not language-specific, whereas the latter is language-specific. Further, we briefly discussed that since reading skill is universal, L2 reading ability is more or less proportional to the difficulty that L2 presents to the reader, which is determined by the linguistic distance between the reader's L1 and L2.

Now, let's think about the possible difference between L1 reading and L2 reading abilities.

IV. L1 reading ability versus L2 reading ability

1. Characteristics of L1 and L2 reading abilities

In the case of L1, since language proficiency is more or less naturally acquired and, therefore, does not present so much difficulty to the reader, reading skill becomes the major constituent of the reading ability. In other words, L1 reading ability is largely determined by the reader's reading skill. Whereas in the case of L2, it is the other way around. While reading skill, which the reader has already acquired in the course of learning to read his or her L1, has its part to play, language proficiency plays a major role in constituting the reading ability, simply because language proficiency is what the reader has to learn, unlike reading skill. Reading ability depends not so much on reading skill as on language proficiency. The success of reading is heavily dependent on how successfully the reader has acquired L2 language proficiency, rather than on his or her 'prior' reading skill. Alderson (1984) reviewed much of the reading research published and concluded that there is a language threshold beyond which second-language readers have to progress before their first-language reading abilities can transfer to the second language situation. This means that L2 language proficiency is the prerequisite for the transfer of L1 reading skill to L2 situation, indicating the relative importance of language proficiency in L2

reading ability. Alderson (1984) further says that “in second-language reading, knowledge of the second language is a more important factor than first-language reading abilities” (p. 23). Cummins (1979, 1991) implies that no instruction in second-language reading is necessary—all that is required is sufficient second language knowledge for the ability to transfer. All these seem to indicate the relative importance of L2 language proficiency in L2 reading ability. The relative importance of reading skill and language proficiency for L1 and L2 reading abilities can be illustrated in the following way.

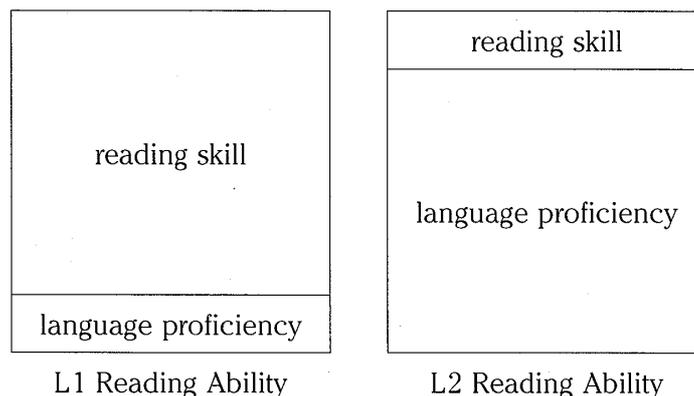


Figure 2. Constituents of L1 and L2 Reading Abilities

2. L2 learners' perception of L1 and L2 reading abilities

The following is the result of a survey conducted on 150 university students in Japan who are studying English as a foreign language.

Table 1. Students' Perception of L1 and L2 Reading Abilities

Q. Is L2 Reading Ability different from L1 Reading Ability? ($N=150$)

Yes, they are different	No, they are the same
91 (60.7%)	59 (39.3%)

This result reveals that Japanese EFL learners perceive L1 and L2 reading abilities differently in spite of the fact that reading skill is universal. What this perception difference indicates is the comparatively large role that language proficiency plays in L2 reading ability.

Here are the typical responses of the students surveyed when they were asked how they define L1 and L2 reading abilities:

L1 reading ability is:

understanding the author's intention, predicting the flow of the story, organizing the story in my head, logical interpretation, reading between the lines, imagination, understanding words and analyzing their meanings, reading for deep understanding, understanding the

meaning behind words, etc.

L2 reading ability is:

vocabulary, understanding grammar, understanding sentence structure, converting letters into meaning, pronunciation, understanding English without Japanese translation, etc.

From the above lists, it can be concluded that to the majority of EFL learners it is language proficiency that is the dominant constituting factor of L2 (English) reading ability, while reading skill is the major contributor to L1 (Japanese) reading ability.

So far, we have discussed and confirmed with the students' voices that language proficiency is the major contributor to L2 reading ability and it is the reading skill that occupies the large part of L1 reading ability.

V. Issues for Japanese EFL readers

As we have seen, language proficiency is the main contributor to L2 reading ability. Japanese EFL learners should be no exception. Given the linguistic distance between English and Japanese, the part that language proficiency plays in their reading ability is well expected to be even greater compared with other EFL readers.

1. Perception of EFL reading difficulties

To find out more about what constitutes Japanese EFL learners' reading ability, another survey was conducted on 156 university students who are studying English as a foreign language. The students were asked to write about the difficulties they feel when they try to read English. They were instructed to write freely on a blank sheet of paper as many items as they came up with and the number of responses totaled 324.

To explain how to read this table, for example, 136 out of 156 students, or 87.2% of them wrote that the reason they cannot read or experience difficulty in reading English is the lack of vocabulary, and 136 accounted for 42.0% of the total responses, which is 324.

A total of 324 responses were categorized into 12 items listed above. Out of those 12 items, 7 were language proficiency-related (1. vocabulary, 2. sentence structure, 3. grammar, 4. translation, 5. idiomatic expressions, 6. pronouns, and 10. pronunciation); whereas 4 (7. reading speed, 8. background knowledge, 9. tunnel vision, and 11. prediction) were reading-skill related. The total number of language proficiency-related responses was 262, or 80.9% of all the responses. On the other hand, the total number of reading skill-related responses was 17, or just 5.2% of the total responses.

These results clearly show that language proficiency-related issues pose greater difficulty for Japanese EFL learners than reading skill-related issues. Among language-related items, the majority of respondents listed the lack of vocabulary, the knowledge of grammar and sentence structure as the main causes of the difficulty they experience in reading. In fact, these three factors alone account for over 70% of all the responses. In order to be

successful readers, Japanese EFL learners need to improve their language proficiency, focusing on vocabulary, grammar and syntax knowledge.

Table 2. Causes of Difficulty in EFL Reading

Q. When you cannot read or experience difficulty in reading, what are the reasons?
Write as many as you can think of.

	No. of responses	N = 156	N = 324
1. vocabulary	136	87.2%	42.0%
2. sentence structure	47	30.1%	14.5%
3. grammar	44	28.2%	13.6%
4. translation	19	12.2%	5.9%
5. idiomatic expressions	7	4.9%	2.2%
6. pronouns	6	3.8%	1.9%
7. reading speed	6	3.8%	1.9%
8. background knowledge	5	3.2%	1.5%
9. tunnel vision	5	3.2%	1.5%
10. pronunciation	3	1.9%	0.9%
11. prediction	1	0.6%	0.3%
12. others	45	28.8%	13.9%

To sum up, to Japanese EFL learners, reading is a language problem, not a reading problem. What is needed as reading instruction is not so much reading skill training or higher-level top-down processing training as the training to improve language proficiency or lower-level bottom-up processing.

2. The importance of bottom-up processing and its automatization for Japanese EFL learners

The importance of bottom-up processing for Japanese EFL learners has been claimed by many researchers. Kuramoto, A., Ito, K., Nishida, H., & Shiki, O. (2006) assert that the problem that Japanese EFL learners have in their reading skills is their bottom-up skill; therefore, EFL reading instructions should focus more on remedying students' limited bottom-up skills than improving their top-down skills.

However, to have sufficient bottom-up processing skills or language proficiency as it is called in this paper is not enough. The significance of obtaining sufficient language proficiency for Japanese EFL readers is twofold. First, the lack of language proficiency is what is keeping them from reading or reading fluently as we have seen in Table 2. To improve their language proficiency simply makes it possible for them to read with a certain

level of fluency. Second, a sufficient level of language proficiency makes it possible for the reading skill to transfer from L1 to L2.

According to Perfetti & Lesgold (1977), since attention capacity assigned to bottom-up processing and top-down processing is limited, it becomes crucial to carry out bottom-up processing with the minimum amount of cognitive capacity so that top-down processing can be carried out with the largest possible amount of cognitive capacity. Stanovich (1980) in his interactive compensatory explanation of reading fluency reasons that good readers are quite able to use automatic, attention-free, bottom-up processes for word decoding and thus reserve their limited top-down, contextually dependent processes for comprehending what they read. In other words, the effective allocation of the limited cognitive resources becomes possible through the automatization of lower-level processing. After all, despite the importance of language proficiency or bottom-up processing ability for Japanese EFL learners which has been emphasized throughout the latter part of this paper, as Grabe and Stoller (2002) says, “the same logic applies equally well whether the goal is to understand how a person learns to read in his L1, or L2 or, for that matter, L3” (p. 5). They continue to say that “while the path of development and the rate of progress may vary for different L2 readers, the end goal of highly skilled fluent reading looks quite similar for both L1 and L2 learners when advanced expertise emerges” (ibid.). The importance of the automaticity of lower-level processing (for Japanese EFL learners) is advocated by many researchers such as Kadota (2002) and Oishi (2006).

3. Constituents of bottom-up processing skill/language proficiency for Japanese EFL learners

Among the language proficiency-related items that emerged as a result of the survey, the lack of vocabulary was by far the most serious obstacle for Japanese EFL readers. There is no question about that. According to the research findings, L2 readers need to know 95–98% of the vocabulary in order to comprehend the text successfully (Laufer, 1989; Hu and Nation, 2000). The lack of vocabulary knowledge can pose a serious problem for Japanese EFL learners as well.

An equally serious factor, however, might be their lack of knowledge of grammar and syntactic structures. Given the huge differences in grammar and syntactic structures between English and Japanese, it is very likely that to know words is sometimes not enough to make out the meaning of sentences. Readers need to have a sufficient level of grammar and syntax knowledge so that they can handle the process of syntactic parsing. As a matter of fact, the importance of grammar knowledge is emphasized by many researchers. Urquhart and Weir (1998) states that “grammar is a component of reading that has been almost ignored in the research.” They go on to say “it seems to us that this is an interesting and potentially valuable research area which L2 teachers and applied linguists are in good position to investigate” (p. 269). Alderson (2000) says that “research has shown the importance of a knowledge of particular syntactic structures, or the ability to process them, to some aspects of second-language reading” (p. 37). After reviewing the limited

literature on the significance of grammatical or syntactic knowledge for L2 reading, Shiotsu and Weir (2007) conducted three studies on Japanese university EFL population and concluded that all these studies offered support for the relative significance of syntactic knowledge over vocabulary breadth in predicting text reading comprehension test performance.

VI. Summary and conclusion

The purpose of this paper was to investigate factors which constitute reading ability of Japanese EFL learners. We first considered what reading is by looking at two types of reading processing models: top-down models and bottom-up models. We then discussed the constituents of reading ability by looking at the two aspects of reading ability: higher-level cognitive skill, which was referred to as 'reading skill' in this paper and language knowledge and the skill to process it, which was referred to as 'language proficiency' in this paper. We further discussed that while reading skill is universal and can transcend language differences, language proficiency is unique to each language and comes in a wide variety.

We then discussed the possible difference between L1 and L2 reading abilities and concluded that the roles played by reading skill and language proficiency vary between L1 and L2. In the case of L1, since language proficiency has already been acquired, the reader's reading ability is more or less determined by his or her reading skill. Whereas in the case of L2, it is not so much reading skill as language proficiency that determines the success of reading. Without sufficient L2 language skill, the reader's reading skill, which he or she has already acquired while learning to read his or her L1, cannot be transferred to L2 reading situation. That is to say, poor L2 proficiency suppresses the use of reading skill that the reader already has, and this is the reason L2 readers cannot read L2 the way they read L1. This L1-L2 difference in terms of reading skill and language proficiency division was verified by the survey results, which revealed that Japanese EFL learners view L1 as reading skill-oriented, and L2 as language proficiency-oriented.

Then the discussion narrowed down to the issues for Japanese EFL readers. The survey results revealed that the major difficulty that Japanese EFL learners experience in reading English has more to do with language factors rather than reading factors. To them, reading is a language problem rather than a reading problem, implying the effectiveness of focusing on language knowledge and the lower-level bottom-up processing training and the training for the automatization of its process for the purpose of making the fullest use of the limited cognitive capability to accomplish efficient reading.

The discussion proceeded to clarify what lower-level, bottom-up processing should entail for Japanese EFL learners. We concluded that the knowledge of grammar and syntax was the most important part of bottom-up processing for Japanese EFL learners.

Given the fact that English is L2 which is linguistically distant from their L1, to

Japanese EFL learners reading is a language problem rather than a reading problem. Therefore, reading instruction should focus more on language proficiency instead of reading skill. In particular, what Japanese EFL learners need most is the knowledge of grammar and the training to automatize the process of syntactic parsing.

Acknowledgements

The author would like to express his gratitude to Prof. DeChicchis, Kwansei Gakuin University, for his invaluable advice on the contents and the English usage of this paper.

VII. References

- Alderson, J. C. (1984). Reading in a foreign language: a reading problem or a language problem? In J. C. Alderson and A. H. Urquhart (Eds.), *Reading in a foreign language*. London: Longman.
- Alderson, J. C. (2000). *Assessing Reading*. Cambridge: Cambridge University Press.
- Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, 49, 222-251.
- Cummins, J. (1991). Conversational and academic language proficiency in bilingual contexts. *AILA Review* 8: 75-89.
- Frost, R. (2005). Orthographic systems and skilled word recognition processes in reading. In M. Snowling and C. Hulme (Eds.), *The science of reading* (pp. 272-295). Victoria: Blackwell Publishing.
- Grabe, W. and Stoller, F. L. (2002). *Teaching and Researching Reading*. Harlow: Longman.
- Hu, H. M. and Nation, P. (2000). Unknown vocabulary density and reading comprehension. *Reading in a Foreign Language*, 13, 403-430.
- 門田修平 (2002). 『英語の書きことばと話しことばはいかに関係しているか：第二言語理解の認知メカニズム』 東京：くろしお出版
- Kuramoto, A., Ito, K., Nishida, H., & Shiki, O. (2006). presentation given at An International Forum on the 1st- and 2nd-language Sciences held at the University of Hawai'i, Manoa.
- Laufer, B. (1989). What percentage of text-lexis is essential for comprehension? In C. Lauren and M. Nordman (Eds.). *Special Language: From Humans Thinking to Thinking Machines*. Clevedon and Philadelphia, PA: Multilingual Matters.
- 大石晴美 (2006). 『脳科学からの第二言語習得論』 京都：昭和堂
- Segalowitz, N., Paulsen, C. and Komoda, M. (1991). Lower level components of reading skill in higher level bilinguals: Implications for reading instruction. *AILA Review*, 8, 15-30.
- Shiotsu, T. and Weir, C. J. (2007). The relative significance of syntactic knowledge and vocabulary breadth in the prediction of reading comprehension test performance. *Language Testing*, 24, 99-128.
- Stanovich, K. E. (1980). Toward an interactive-compensatory model of individual differences in the development of reading fluency. *Reading Research Quarterly*, 16, 32-71.
- Urquhart, S. and Weir, C. (1998). *Reading in a Second Language: Process, Product, and Practice*. New York: Longman.

Factors Constituting Reading Ability of Japanese EFL Learners

Naoya HASE

The purpose of this brief paper is investigate factors which constitute reading ability of Japanese EFL learners. By reconsidering the nature of reading, reading ability and its constituents, especially for L2 learners, it is concluded that to Japanese EFL learners, reading is not so much a reading problem as a language problem. It is suggested that more emphasis should be placed on the training of lower-level bottom-up processing skills and the automatization of those skills.