

THE ROLE OF EXTENSIVE READING IN JAPANESE AS A SECOND LANGUAGE

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Abstract

This research aimed to clarify improvement of comprehension through extensive reading in learners of Japanese as a second language. The investigation was designed to record and analyze reader eye movements and determine how that related to text comprehension. After three months of practice with a variety of reading materials, the results showed that readers at the intermediate level controlled their reading more and that they adjusted the manner in which they read to the content, by altering their reading speed and fixations. The readers usually placed their attention on the words in the text initially, but, increasingly, they began to focus on and enjoy the content of the stories. They gradually acquired the skills necessary to comprehend texts and improve reading fluency. In conclusion, this research has demonstrated that extensive reading provides opportunities for learners to foster related autonomic skills.

1 Background of the research

Extensive reading is a type of reading in which learners select texts and grasp the meaning of the overall contents by themselves for enjoyment. While doing so, they acquire the ability to understand the structure of the passages, make inferences, monitor progress, evaluate texts, and maintain motivation (Grabe 2009). Although extensive reading had already been introduced in the 1980s, it not really applied to Japanese language education until 2000, and the effectiveness has hardly been demonstrated objectively, except in terms of an increase in incidental vocabulary knowledge (Mikami 2011), even though teachers and students that experience extensive reading have been strongly convinced of its effectiveness.

2 The purpose of the research

The purpose of this research is to clarify the effects of extensive reading in Japanese language learning, focusing on the differences in reading ability between the beginning and the end of the three month extensive reading session.

In the research, intermediate learners of Japanese language who were at CEFR B1 level (JLPT N3 passed) in Japanese language were requested to read two passages consisting of 700-1000 characters at both the beginning and the end of the three-months reading course. For the research, their reading time for the passages, eye-movement fixation data while reading and

free-recall protocol data were collected and used for analysis. The results obtained were to be associated with findings from previous research and learning theory so as to create an “extensive reading model”

3 The research design

The two texts read by the learners in this research were: “Nogiku no Haka (Nogiku),” called “Tomb of the Wild Chrysanthemums” in English, an original work by Ito Sachio, which was rewritten as a graded reader by NPO Tadoku Supporters, and “Torokko,” written by Akutagawa Ryunosuke, which also was rewritten by NPO Tadoku Supporters. The texts displayed were the first part of the stories: the former text was 925 letters and the latter 816 letters, and the learners were told to read them from eight slides displayed on the screen of a monitor.

The learners consisted of two groups instructed to read either one of the two texts at the beginning of the course and the other at the end of the course, so that a counterbalance could be accomplished in the research design. The learners’ eye movement data while reading was recorded using an eye movement measurement device (Tobii TX 300), and a comparison of the data taken at the beginning and then at the end of the course was made with regard to the reading time and the fixation (gaze) point, and gaze time was calculated from the data. In this study, fixation was set to 33-millisecond or longer gaze duration.

After reading, the learners were instructed to recall and recount the content of the texts, and this was recorded as free-recall data. The sentences of each text were divided into idea units (IU), and each IU was numbered. The free-recall data of the learners was examined as to which IU were reproduced, and learner comprehension was analyzed based upon what the IUC they reproduced.

4 The results and the analysis of the survey

In the research, 21 intermediate level Japanese language learners cooperated with the survey on a voluntary basis. The reading data consisted of the eye-movement data during reading and protocol data concerning the text content, which were organized for further analysis. The eye-movement data was sorted page by page and analyzed as to which words received greater fixation. The protocol data was transcribed and divided by the IU recalled, based on the IU number corresponding to it in the text. Figure 1 and 2 show examples of gaze while learners were reading: Figure 1 indicates reading done at the beginning of the course and Figure 2 shows those done at the end of the course. There is superposition of the eye-movement tracking during reading on the screen of the fifth page of the “Nogiku” text. The fixations in Figure 1 were seen to occur relatively uniformly, whereas some of the fixations in Figure 2 were more dense than others, such as “村中の人^が (people in the village),” “仲が良すぎる (too close to be friends)” and “とても厳しかった (very strict).”

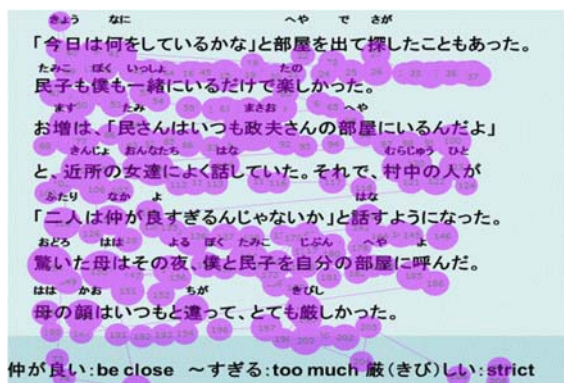


Fig. 1 The learners' eye-movement during reading at the beginning of the course

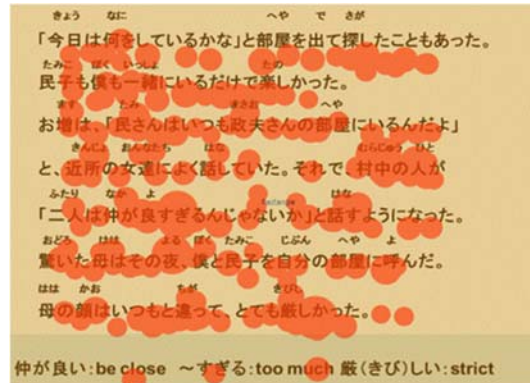


Fig. 2 The learners eye-movement during reading at the end of the course

For comparison of the learners' reading between the beginning and the end of the course, the mean and standard deviation of the reading time and total time of fixations for each page (slide) were calculated. Analysis of variance, t-score and the effect size were calculated according to the above data, as shown in Table 1 and Table 2.

As shown in Table 1, which describes "Nogiku" data, both reading time and total fixation time for each slide were shorter at the end of the course and the decrease was significant for slides 1 to 3 as well as for the total of the slides. On the other hand, for "Torokko" the reading time decreased in slide 1 and slide 4, while the others increased, and no statistically significant difference could be recognized. The total fixation time in reading "Torokko" increased at the end of the course period, except for slide 4. The increase of fixation time in slide 6 showed the tendency toward a significant difference. It is assumed that learners at the end of the course took the time to read "Torokko" more carefully than those who read it at the beginning.

Table 1. Statistical data for learners reading "Nogiku no Haka" (seconds/200 characters)

	Beginning Reading Time			End Reading Time			Analysis of Variance	t-score	effect size (r)
	n	mean	SD	n	mean	SD			
slide 1	6	128.37	44.33	5	78.83	22.92	0.225	3.082 *	0.72
slide 2	6	118.41	26.18	5	92.12	24.05	0.894	2.347 *	0.62
slide 3	6	114.41	33.13	5	71.13	14.42	0.132	3.702 *	0.78
slide 4	6	101.04	42.11	5	80.71	27.08	0.413	1.270	0.39
slide 5	6	92.52	32.79	5	63.76	12.32	0.081	1.808	0.52
slide 6	6	87.21	27.68	5	78.76	29.35	0.878	0.668	0.22
total	6	641.95	178.92	5	465.31	115.23	0.414	2.595 *	0.65

	Beginning Total Fixation Time			End Total Fixation Time			Analysis of Variance	t-score	effect size (r)
	n	mean	SD	n	mean	SD			
slide 1	6	104.33	39.93	5	66.03	16.89	0.120	2.729 *	0.67
slide 2	6	97.91	26.54	5	74.03	16.23	0.362	2.396 *	0.62
slide 3	6	98.39	30.84	5	57.81	13.19	0.125	3.737 *	0.78
slide 4	6	88.01	38.82	5	65.47	21.01	0.257	1.587	0.47
slide 5	6	79.95	25.54	5	52.47	8.67	0.057	2.249	0.60
slide 6	6	75.71	26.10	5	63.81	19.83	0.614	1.142	0.36
total	6	544.30	166.82	5	379.64	80.29	0.181	2.756 *	0.68

Table 2. Statistical data for learners reading “Torokko” (seconds/200 characters)

	Beginning Reading Time			End Reading Time			Analysis of Variance	t-score	effect size (r)
	n	mean	SD	n	mean	SD			
slide 1	6	103.61	43.69	4	96.26	35.08	0.762	0.406	0.14
slide 2	6	83.36	34.71	4	91.69	43.78	0.606	0.483	0.17
slide 3	6	95.01	39.31	4	99.08	46.94	0.678	0.214	0.08
slide 4	6	107.52	44.65	4	95.22	48.24	0.818	0.597	0.21
slide 5	6	88.15	14.80	4	103.70	57.54	0.012	0.459	0.16
slide 6	6	93.21	40.21	4	106.49	65.00	0.327	0.576	0.20
total	6	570.86	191.77	4	592.44	281.01	0.426	0.208	0.07

	Beginning Total Fixation Time			End Total Fixation Time			Analysis of Variance	t-score	effect size (r)
	n	mean	SD	n	mean	SD			
slide 1	6	74.84	25.03	4	79.30	35.64	0.827	0.666	0.23
slide 2	6	64.19	21.77	4	88.37	49.54	0.184	1.154	0.38
slide 3	6	75.08	24.70	4	81.92	37.37	0.241	1.096	0.36
slide 4	6	81.34	26.81	4	79.28	41.28	0.395	0.067	0.02
slide 5	6	68.45	19.02	4	89.37	48.31	0.055	0.347	0.12
slide 6	6	64.24	29.47	4	82.06	43.26	0.112	1.916	0.56
total	6	428.14	120.69	4	500.30	226.51	0.116	1.044	0.35

Free-recall protocol data after reading revealed that 1) the amount of recall increased and 2) the learners started to mention the story development aspects of the texts more at the end of the course. These results indicate that learners became able to remember the text content more and were more conscious of the story development part of the texts through extensive reading. For

"Nogiku," in which the characters and the relationships are revealed in the first half where the story develops, the rich content of the story was recalled orally in detail at the end of the course. In "Torokko" the learner orally indicated Ryohei's psychological transition with Ryohei interacting with two men and advancing "Torokko" together. For both text readings, there was a greater number of utterances at the end of the course, which were richer both in quality and quantity.

5 Discussion

The results of this survey demonstrated that learners were able to understand the text content properly and richly after completing the extensive reading course. As for the time needed for reading, different results were shown depending on the difficulty of the material. Reading time for the text was shorter when it was easy for the learner to comprehend. These findings are consistent with previous research done by Suzuki (1998), in which pre-intermediate learners who could comprehend the text as a whole sometimes read regressively or repeatedly to understand relatively difficult text. The story development in "Torokko" is not as clear, so it was difficult for learners to understand completely. This may have caused the learners not to be able to use prior knowledge, which required that they concentrate on collecting new information from the sentences, which seemed to slow down their reading speed. On the other hand, "Nogiku" is a story in which the main character talks about himself and the relationships around him as the narrator of the story, which allowed learners to grasp the content based upon their own knowledge and relationships, which, as a result, shortened the reading time of slide 1, significantly.

Also, Kumada (2016) divides periods of extensive reading into three stages. The beginning is a trial and exhilaration stage when the learners utter many comments on the format and words of the texts and an adjustment is required between the books that they want to read and their reading ability. In the intermediate stage, the learners become used to reading long stories and balancing their language level and the text difficulty, at which time they read according to their need and/or motivation. Learners at the completion stage, who have strategies for reading and hardly require teacher support, establish their style of reading and find enjoyment through reading. Kumada insists that these stages can be applied to extensive reading for all learners. Based on the above, extensive reading class can lead learners to pay more attention to the flow and/or the content of the passage and utilize techniques to read with appropriate strategies rather than focusing on each vocabulary item.

Beaumont (2005) introduced classification based on Guilbert (1987), which had reorganized Bloom's learning objective (1964) into three categories and three stages, and this classification can be applied for positioning extensive reading as a process of learning. In this research, we propose a sample extensive reading model as one that captures the transformation of learners as shown in Figure 3. This seems to capture the process of accomplishing extensive reading from multiple perspectives.

Concerning the cognitive domain, learners become able to activate their knowledge spontaneously through extensive reading, as shown in Figure 3. For the affective domain, learners try extensive reading first and gradually the process becomes habitualized and internalized for them. This transition can be thought to lead to a more positive attitude due to pleasurable experiences with extensive reading. Learners can effectively utilize their senses and

various parts of their body by taking on the positive challenge of extensive reading. All of this will enable learners to read autonomously.

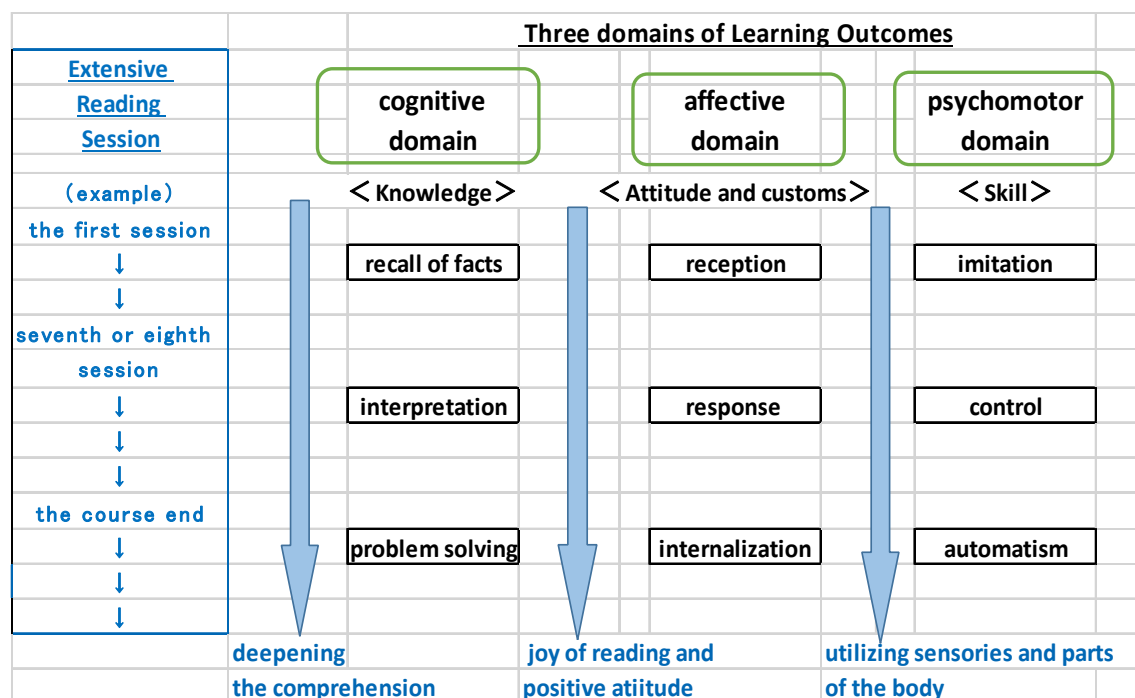


Fig. 3.¹ The process and learner change through an extensive reading model

This study examined and demonstrated some of the effects of extensive reading and proposed an extensive reading model. More detailed investigation of this topic is expected in the future.

Acknowledgment

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¹ The figure showing the “Three domains of Learning Outcomes,” excluding blue words, was taken from the webpage of the Institute for the Advancement of Higher Education, Hokkaido University (2015) <<https://high.high.hokudai.ac.jp/wp-content/uploads/2015/04/mokuhyo.pdf>>

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