The Reading Matrix: An International Online Journal
Volume 15, Number 2, September 2015

Repeated Reading for Japanese Language Learners: Effects on Reading Speed, Comprehension, and Comprehension Strategies

Greta Gorsuch

Etsuo Taguchi
Daito Bunka University

Hiroaki Umehara
Rikkyo University

ABSTRACT

A perennial challenge to second language educators and learners is getting sufficient input in settings where the L2 is not widely used, in this case beginning-level American university students learning Japanese. Reading is a significant means of getting L2 input, with recent calls for attention to reading and authentic texts as curriculum components for language learners at all levels. Nonetheless, L2 learners do not read much. This underscores a significant impediment, which is L2 learners' lack of reading fluency. Using a time-series design, this report focused on a theory-based reading fluency program called Repeated Reading in which learners read a text repeatedly both silently and with audio support (where a text is read aloud while learners follow along silently). Engaging in a moderate-intensity 23-treatment program over a full semester, 14 beginning Japanese language learners in a U.S. university increased their hiragana character and word decoding skills, and improved their comprehension. At the same time they reported using a variety of comprehension strategies, and feeling more confidence reading authentic Japanese elementary school texts. This report concludes with practical suggestions for implementing an RR program.

INTRODUCTION

A perennial challenge for second language learners is getting sufficient L2 input and language practice in settings where the L2 is not widely used (Chen, 2006; Gebhard, 1996; Redfield, 1999; Yang, 2007), in this case beginning-level American university students learning Japanese. Reading is a significant means of getting input and experience with the L2 (Al-Homoud & Schmitt, 2009; Bochner & Bochner, 2009; Day & Bamford, 1998; Krashen, 1995; Waring, 2009), with recent calls for attention to reading and authentic texts as curriculum components for language learners at all levels (Byrnes, 2001; Cirocki, 2009; Kern, 2003, 2008; O'Donnell, 2009; Swaffar & Arens, 2005). If L2 learners are to become life long learners (e.g., Dornyei, 2001; Fukai, 2005; Gorsuch, 2009; Graham, 2006; Rivera & Matsuzawa, 2007), increasing their agency as

independent readers is a worthy goal (Gorsuch & Taguchi, 2010). Independent readers can select texts to read for their own purposes, such as language, culture, or aesthetic learning, and can use a variety of strategies to comprehend texts (Eskey, 1986; Kern, 2003; Koda, 2005; Nuttall, 1982).

Nonetheless, for a variety of reasons, L2 learners do not read much (Fujigaki, 2009; Tanaka & Stapleton, 2007; Yang, 2007). One impediment is a traditional mindset of limiting "reading" to single sentences and contrived expository texts for grammar and vocabulary presentation (Amer, 1997; Bell, 2001; Bernhardt, 1991, 2011; Tanaka & Stapleton, 2007). Indeed, it has been argued that foreign language learning in the U.S. higher education is devoted to oral skills in the lower divisions (Schulz, 2006), veering to a different direction for upper division courses where the focus is on difficult literary texts (e.g., Allen, 2009; Bernhardt, 1991, 1995; Kern, 2008; Swaffar, 2006; Swaffar & Arens, 2005). Learners are ill-equipped to handle this shift in purpose due to lack of experience with the L2 (vocabulary, grammar structures) (Bernhardt, 1991; Fukkink, Hulstijn, & Simis, 2005; O'Donnell, 2009) and the use of lengthy, difficult texts (Bernhardt, 1995; Chen, 2006).

This underscores another impediment: L2 learners' lack of reading fluency (Fukkink et al., 2005; Gorsuch & Taguchi, 2008; Grabe, 2009a, 2010; Taguchi, Gorsuch & Sasamoto, 2006; Taguchi, Gorsuch, Takayasu-Maas, & Snipp, 2012). By reading fluency we mean the ability of a reader to decode text quickly and accurately while maintaining reasonable comprehension (Chang, 2010; Grabe, 2009a, 2010; Taguchi et al., 2006 yes it is). Fluent readers are sufficiently fast and accurate in word recognition and thus have the attentional resources to invoke post-lexical and other higher order comprehension processes (Gorsuch & Taguchi, 2008; Grabe, 2009a, 2010; Taguchi et al., 2006). L2 reading fluency is given short shrift in programs (Gorsuch & Taguchi, 2009; Taguchi & Gorsuch, 2012), and in the end, many L2 learners find reading to be a slow, laborious process (Anderson, 1999; Grabe, 2009b; Jensen, 1986; Segalowitz, Poulsen, & Komoda, 1991; see also Fukai, 2005).

Using a time series design, this report focused on a theory-based reading fluency program called Repeated Reading (RR), in which learners read a text repeatedly both silently and with audio support (where a text is read aloud while learners follow along silently) (Han & Chen, 2010; Taguchi & Gorsuch, 2012). RR has been successfully used in both L1 and L2 education settings and has been found to increase readers' fluency and comprehension, not only with treatment texts but with new, unpracticed passages (Gorsuch & Taguchi, 2008; Young, Bowers, & MacKinnon, 1996). Engaging in a moderate-intensity 23-treatment program over one semester, 14 beginning Japanese language learners at a U.S. university increased their *hiragana* character and word decoding skills, and comprehension. At the same time they reported using a variety of comprehension strategies, and feeling more confidence reading authentic Japanese elementary school texts. This report concludes with practical suggestions for implementing an RR program.

Reading in a Second or Foreign Language

Reading in a second language (L2) or foreign language (FL) differs from reading in a first language (L1) in distinct ways. Since L2 readers in college are likely to be mature learners, they may know better how the L2 works as a language, and about themselves as language learners (Grabe & Stoller, 2011). That said, L1 readers have well-developed oral proficiency, vocabulary knowledge, and tacit grammar knowledge at the time they start learning to read (Grabe, 2009b; Segalowitz, 2003). L2/FL readers likely have limited oral proficiency and vocabulary, and underdeveloped grammar knowledge. Of more direct relevance to the current report is the

superiority that L1 readers enjoy over L2 readers with fluent processing. Compared to L1 readers, L2 readers are invariably slower and less accurate in processing text (e.g., Favreau & Segalowitz, 1982; Haynes & Carr, 1990; Macnamara, 1970; Oller & Tullius, 1973). L1 readers accumulate years of reading experience, which leads to fluent processing of text information.

Different Orthographies and L2 Reading

Another unique issue that distinguishes between L1 and L2 reading is that many L2 readers start learning to read after acquiring their L1s. Cross-linguistic research has shown that L2 readers' lower identification processes (recognizing letters, characters, and words, which are cornerstones of reading fluency), are facilitated when their L2 shares a similar orthography with their L1 (e.g., Akamatsu, 1999; Green & Meara, 1987; Koda, 1988, 1989; Muljani, Koda, & Moates, 1998; Ryan & Meara, 1991). Muljani et al (1998) compared two groups of ESL learners whose L1s were Indonesian (a language using a Roman alphabetic orthography shared by English) and Chinese (a logographic writing system). The Indonesian ESL learners were significantly faster than the Chinese ESL learners in recognizing both high and low frequency words and nonwords that followed Indonesian alphabetic spelling patterns. This suggests a facilitation effect for L1 and L2 orthographic similarity for L2 word recognition (see also Koda, 1989, 1996). Thus, when English-speaking American students whose L1 is written in a Roman alphabetic script learn to read Japanese (written in a combination of non-Roman alphabetic script and logographic characters, see discussion below), we anticipate added challenges.

Some of these challenges arise from how written text is processed in the L1, and then how learners may use such processing strategies when reading in the L2 (Koda, 1992, 1996). Some languages use an orthography that more or less represents sound-grapheme relationships, such as Finnish and Italian (which use a "transparent" Roman-alphabetic orthography) (see Katz & Frost, 1992). The letter-sound relationship in other languages such as Hebrew and Chinese is not so simple and deviates from a direct spelling-sound relationship (an "opaque" orthography). Chinese, for instance, uses a logographic orthography with each character representing a word or morpheme. Learners of Chinese whose L1 uses a "transparent" writing system and are accustomed to processing texts using a phonological translation of individual words to aid in word meaning recognition, will have a difficult time predicting the pronunciation of unknown Chinese words/characters which have few reliable phonological cues. They will be thrown back on visually processing a word, and may not have access to the phonological processing strategies which help them process fluently and comprehend in their L1s. So, when reading in the L2 they will either know a word/character by sight or not, and if they do not, will not have available phonological cues with which to "sound out" the word and recognize it that way. To sum up, differences between L1 and L2 reading are largely caused by gaps between the two groups of readers in the amount of accumulated exposure to L2 print, the degree of similarity of orthographies between the two languages, and the potential difference in L1 and L2 processing strategies needed to recognize words.

Reading Japanese as a Second or Foreign Language

Japanese has four different writing systems used on a regular basis: *hiragana, katakana, kanji*, and *romaji*. *Higagana* and *katakana* are non-Roman-alphabetic Japanese scripts in which there is a "transparent" one-to-one correspondence between sounds and symbols (Akita & Hatano,

1999; Taylor & Taylor, 1995). In modern Japanese, *hiragana* and *katakana* collectively have 46 basic syllables and 25 expanded syllables using diacritics of two small dots or a small circle, totaling 71. In texts read by middle school age and older native speakers of Japanese, *hiragana* is mainly used for function words to show case, and adjective- and adverb-inflections, while the use of *katakana* is limited for words or names of alphabetic (foreign) origin. *Kanji* is a meaning-based "opaque" logographic script based on Chinese, where one character represents a word or morpheme. *Kanji* is mainly used for content words in texts (Koda, 1992). *Romaji* is the Roman alphabet and is used for well-known acronyms in text, such as IBM or NEC. It is common for all four writing systems to appear in authentic texts read by Japanese above junior high school age.

L1 Reading Processing and Japanese L2 Reading

Koda (1992) studied lower level processing of Japanese words and sentences by U.S. undergraduates, whose L1 (English) uses a somewhat transparent Roman alphabetic orthography. She found that in earlier stages of L2 proficiency, the learners depended more on visually processing the Chinese *kanji* characters they knew in Japanese texts. Their processing was not necessarily mediated by a phonological understanding of the logographic characters, and learners could get by with this strategy, as the texts they read had only a few *kanji* characters which they had already learned. However, at later stages of L2 proficiency "as [the learners] improve their syllabary, Hiragana words are gradually taken into account during comprehension" (p. 506) suggesting more phonological processing. This in turn suggests potentially greater access to texts in which *hiragana* is used to identify grammatical morphemes needed for development of post-lexical comprehension processes. Recall that *kanji* characters are not used to render grammatical morphemes.

The current study focused on texts rendered almost exclusively in *hiragana*, and we argue that good *hiragana* character and word decoding fluency will have a positive effect when it comes time for learners to tackle authentic texts with increasing amounts of *kanji*. *Hiragana* symbols are often used with *kanji* in authentic texts to help native-Japanese readers "sound out" *kanji* characters they may not know and thus cannot process visually (*furigana*). American learners of Japanese with a fluent command of *hiragana* characters and words will similarly benefit. We further note that Japanese and Chinese children (both in countries where the *kanji* logographic writing system is used) start out their schooling with firm grounding in *hiragana* (in Japan) and *pinyin* (in China), both scripts with a "transparent" orthography (Akita & Hatano, 1999; Hanley, Tzeng, & Huang, 1999; Taylor & Taylor, 1995). It is not a stretch to consider teachers' practices in countries where *kanji* characters are taught as also beneficial to Japanese language learners here in the U.S.

The Critical Role Reading Fluency Plays in Successful Reading

Successful reading entails fluency in lower identification processing. That is, recognizing letters, letter clusters, and words, and parsing or recognizing the grammatical structures of sentences should be performed quickly and accurately. If too much of readers' cognitive resources are expended on lower identification processes, little is available for higher-level comprehension skills. Thus readers' comprehension will suffer (e.g., LaBerge & Samuels, 1974; Perfetti, 1985; Stanovich, 1991, 1992). Fluency in lower-level processing is likely key to successful reading comprehension (Grabe & Stoller, 2011).

Repeated Reading

Repeated Reading (RR) is the pedagogical expression of Automaticity Theory (LaBerge & Samuels, 1974; Samuels, 1994, 2004, 2006), which posits a causal relationship between improved fluency in lower-order word recognition and better reading comprehension. Two critical components of RR are practice effects and transfer of practice effects (e.g., Taguchi, Gorsuch, & Sasamoto, 2006). Practice effects come from reading the same passage repetitively, which leads to faster and more accurate word recognition. This is then reflected in faster within-treatment reading rates. Transfer of the practice effects are reflected in faster and more accurate reading of new, *unpracticed* passages. Taguchi, Gorsuch and their colleagues have been investigating the efficacy of RR in a variety of L2 reading contexts, such as Japanese or Vietnamese learning English as the L2. Overall, they found that RR is an effective method for developing L2 readers' fluency regardless of their L1 orthography, with benefits for L2 readers' comprehension as a result (Gorsuch & Taguchi, 2008, 2009, 2010; Taguchi & Gorsuch, 2002; Taguchi, Gorsuch, Takayasu-Maass, & Snipp, 2012; Taguchi, Takayasu-Maass, & Gorsuch, 2004). However, except for Han & Chen (2010), in which a Chinese heritage speaker was the single participant, there have been few studies for RR using extended texts in languages other than English (see, however, Koda, 1992). The present study investigates how RR facilitates reading fluency with American learners of Japanese.

Research Questions

This was a time-series study, meaning that the learners themselves *before* the treatments, were the control group. We understood that some journal readers, engaged in a default belief that an experimental design is necessary to establish causality, would be suspicious of a time series design. Yet we also understood that when conducting classroom research, salient contextual features could not be controlled (as is required by an experimental research design, see Griffee, 2012). In fact, we saw the classroom context as an asset in that we could collect cumulative data from learners in pedagogically worthwhile ways in the form of reading times and post-treatment written reports.

1. Do the participants' reading rates increase over time? Do their reading comprehension scores increase over time?

In order to bring interpretive depth to the quantitative data, and to argue for causality, participants were asked to comment on their experiences engaging in RR after each treatment in an open-ended writing task in their L1s. They were invited to comment on any issue they wished within these parameters: "Please write about what you were thinking as you read, how much you comprehended, and whether your thinking or reading or comprehension changed as you did the task."

2. What are issues brought up by participants in their post-treatment reports? What themes are mentioned frequently, and which are mentioned less frequently?

METHOD

Participants

Participants were 14 U.S. undergraduates in their second semester of Japanese study. There were five females and nine males in their early to mid-20s. None were heritage speakers of Japanese, nor had they studied a foreign language in high school. The participants spent their first semester focusing on speaking and listening skills, and learning *hiragana* and *katakana* characters through direct instruction. RR was the only sustained reading experience offered.

Materials

RR Treatment Texts

The materials for the RR treatments were taken from *Kokugo Ichi Jyou Kazaguruma* ("Japanese Language First Volume Pinwheel"), a mainstream Japanese language arts textbook used in elementary schools in the 1990s (Kurihara, 1992). The *hiragana* texts were segmented on the basis of *bunsetsu*, which is a grammatical unit consisting of a word and its postpositions or suffixes (see Appendix A). Reading *hiragana*-only texts without segmentation between words is a considerable impediment for fluent lower-order processing for both Japanese children ("Naruhodo kyoukasyo," 2013) and L2 learners of Japanese (Koda, 1992) and is a developmental skill. The texts were contemporary stories and folk tales, and most pages had at least one picture that went with the story.

The RR treatment texts in most cases were longer stories that were segmented at discoursally relevant points (see Table 1 below). Thus, the texts were part of a continuing story that repeated themes and vocabulary, which we felt would be effective in increasing participants' automaticity in character and word decoding, and word meaning identification. Also, like Kern (2008), we believed authentic texts instantiate culture, not only in their themes but in their language use, including onomatopoeia, which are common in Japanese narratives. The number of characters and words for each session text increased over time with 36 characters (16 words) for the first session and 104 characters (43 words) for the 23rd session (see Table 1).

Table 1. Repeated Reading Texts by Session

Story Name in *hiragana* (as it appears in the treatment materials)	**Romanized Story Name**	**RR Session**	**Number of Characters**	**Number of Words**
みんな	Minna	1	36	16
		Pre-test	148	58
ぶらんこ１	Buranko 1	2	65	31
ぶらんこ２	Buranko 2	3	75	21
おはなしきいて	Ohanashikiite	4	53	19
はなのみち１	Hananomichi 1	5	42	23
はなのみち２	Hananomichi 2	6	54	26
おはよう	Ohayo	7	70	31
なぞなぞ１	Nazonazo 1	8	63	18

なぞなぞ２	Nazonazo 2	9	55	35
おむすびころりん１	Omusubikororin 1	10	85	33
おむすびころりん２	Omusubikororin 2	11	87	38
おむすびころりん３	Omusubikororin 3	12	101	30
おむすびころりん４	Omusubikororin 4	13	91	30
おむすびころりん５	Omusubikororin 5	14	106	37
おむすびころりん６	Omusubikororin 6	15	95	35
どうぶつのあし１	Doubutsunoashi 1	16	107	40
どうぶつのあし２	Doubutsunoashi 2	17	92	31
おおきなかぶ１	Ookinakabu 1	18	80	22
おおきなかぶ２	Ookinakabu 2	19	63	34
おおきなかぶ３	Ookinakabu 3	20	116	27
おおきなかぶ４	Ookinakabu 4	21	84	32
おおきなかぶ５	Ookinakabu 5	22	92	35
おおきなかぶ６	Ookinakabu 6	23	104	43
		Post-test	148	58

Pre- and Post-Test

The pre- and post-test was a recall protocol procedure which used a 148-character, 58-word stand-alone text which appeared just a chapter later in the book from which the final RR treatment texts were taken. While we judged the text to be no more difficult in terms of unknown vocabulary or grammar than texts in the last half of the RR program, the pre- and post-test text was slightly longer than the RR treatment texts (see Table 1).

The same text was used for both the pre- and post-test to make direct comparisons of changes in participants' reading comprehension (see Appendices A and B). We felt that the three months intervening between the tests would minimize learners' memory-based knowledge of the text content. Participants did not have access to the test text other than during the pre- and post-tests. The same RR treatment procedure was used for the pre- and post-test with two exceptions: First, there was no question and answer period on vocabulary, and second, instead of writing a post-RR-session report, participants wrote everything they could remember about the passage after the fifth and final reading of the text, using their L1s. Participants were not allowed to re-read or look at the test text while they wrote their recalls. Using the same procedure as Gorsuch and Taguchi (2008) scoring was accomplished by all reasonably complete propositional units (in this study, $K = 15$) (see Riley & Lee, 1996). The points were totaled and converted into percentages for propositional units recalled by each participant.

Procedure

RR treatments were done twice a week during the Spring 2012 semester. The pre- and post-tests were administered at the beginning and end of the semester, respectively. Each RR treatment took 20 minutes, and followed the same procedure:

1. Participants read an approximately 79-character (30-word) segment of a story once while timing themselves with a stopwatch. They wrote their times on a time log sheet (see Appendix C). Participants were reminded at each session not to read fast for the sake of

reading fast as in *The stopwatch serves you, you do not serve it.* Participants could ask their instructor a few questions about text items they did not understand, such as vocabulary.
2. Participants then read the text a second and then a third time while listening to it read aloud by one of the authors (their instructor).
3. Participants finally read the text a fourth and fifth time, timing themselves for each reading and marking each time on their time log sheet.
4. At the end of the session, participants wrote a short report in English (see Appendix D). Participants could not look at the treatment text while writing their reports.

Analyses

RQ #1

In line with a time series research design, participants' first, fourth, and fifth reading rates for each session 1-23 were calculated by dividing the number of characters in the passage for a given session by the first, fourth, and fifth reading times reported by participants on their reading log (Appendix C). The means (*M*) and standard deviations (*SD*) were calculated for participants as a group. To estimate how much fluency increased on average for the study, the participants' average cpm (characters per minute) for the first and fifth readings for the beginning-of-semester January 31 session was compared to their first and fifth readings for the end-of-semester April 26 RR session using two repeated measures one-way ANOVAs. The first ANOVA would show whether participants' first reading rates of new, unpracticed passages increased from the beginning to the end of the study. In other words, the first reading rate for the January 31 session was compared to the first reading rate of the April 26 session. The second ANOVA would compare fifth reading rates for the January 31 and April 26 sessions to estimate whether participants' fifth reading rates increased from the beginning to the end of the study, indicating changes in participants' reading rates *within* sessions over time. Significance level was set at $p = .025$ ($p = .05$ divided by 2 for two comparisons), and eta^2 effect sizes were calculated.

To estimate changes in participants' reading comprehension, their pre- and post-test comprehension scores were calculated (see Materials section above) and then the *M* and *SD* were estimated for both the pre- and the post-test. The two *M* were compared using a repeated measures, one-way ANOVA with significance set at $p = .05$. To estimate the effect size, eta^2 was calculated.

RQ #2

Participants' comments were typed into a word processing document for each RR session, with no changes to spelling, etc. Analysis of this large collection of qualitative data was inductive and iterative (e.g., Huberman & Miles, 1998). First, participants' comments were examined sequentially (from the first to the last RR session) over the space of several days and themes that were suggested were penciled in the margins of the printed-out comments. The themes were then grouped into four major categories which were:

1. Themes focused on RR method,
2. Themes in which longitudinal changes in reading or language ability are described but RR is not directly cited,
3. Themes in which the reader is focused on, and
4. Themes in which the text is focused on.

Then, one example from the participants' comments was assigned to each theme. The entire list of themes, each with an example, was circulated to all authors and checked to see whether everyone agreed with the level of transparency the theme reflected the example. Some discussions arose and some data were recoded. Finally, all instances of the themes in the data were grouped under the themes and their numbers were tabulated.

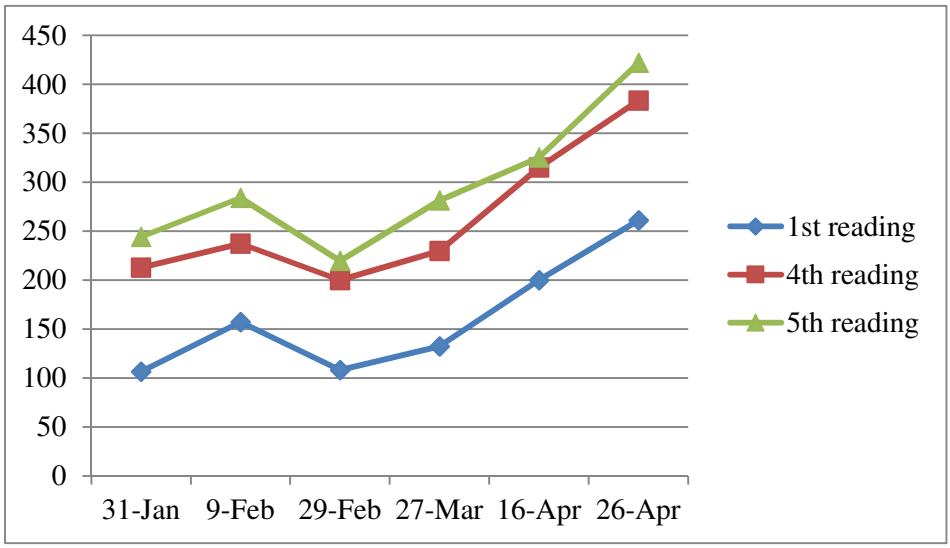
RESULTS

For RQ #1, see Table 2 and Figure 1 below for participants' character per minute (CPM) reading rates at the 2nd, 5th, 10th, 15th, 20th, and 23rd RR sessions.

Table 2. Participants' Character per Minute (cpm) Reading Rates for 1st, 4th, and 5th Readings within Six Sequentially Representative RR Sessions

Session		**2nd**	**5th**	**10th**	**15th**	**20th**	**23th**
Date		1/31	2/9	2/29	3/27	4/16	4/26
First Reading	*M*	106.68	157.33	108.34	132.29	200.14	261.11
	SD	61.08	46.77	48.84	62.95	61.99	69.63
Fourth Reading	*M*	212.64	237.36	199.96	229.82	315.27	383.51
	SD	90.59	54.86	57.27	68.46	62.65	61.40
Fifth Reading	*M*	244.27	283.95	219.60	281.40	325.27	421.90
	SD	88.31	67.42	63.63	66.37	80.12	98.61

Figure 1. Participants' cpm Reading Rates for 1st, 4th, and 5th Readings for Sequentially Representative RR Sessions



From Table 2 and Figure 1 it is clear that within RR sessions (first, fourth, and fifth re-readings), participants' cpm reading rates increased. For session 5 for example, participants' first

silent reading rate was 157.33 cpm, which then increased to 237.36 cpm for the fourth (silent) reading (immediately after the instructor read the text aloud twice), and then to 283.95 cpm for the fifth and final (silent) reading. This pattern was repeated for all RR sessions. But it is also the case that the participants' reading rates increased as the semester proceeded. For instance participants started out at 106.68 cpm for the first reading of session 2, but then increased to 157.33 for the first reading of session 5. While there are decreases in first reading rates on sessions 10 and 15 (108.34 cpm and 132.29 cpm respectively), the first reading rate keeps climbing to 200.14 cpm for session 20 and 261.11 cpm for session 23. We have found in other RR studies we have done (Taguchi & Gorsuch, 2002; Taguchi et al, 2004; Gorsuch & Taguchi, 2008) a similar pattern, where the short-lived dips in first reading rates co-occur with the first installment of a new story. The new themes and vocabulary likely cause learners to slow their reading because they are encountering unfamiliar vocabulary, characters, and themes. Nonetheless, first reading rates still exponentially increased over time in the current study, meaning that participants likely used more automatized character and word decoding, and, we argue, word recognition skills on new, unpracticed passages.

The increase between participants' first reading rates for session 1 versus session 23 (see Table 2 above) was statistically significant with $p = .000$ and eta^2 effect size = .928, meaning that 92.8% of the variance of this increase was due to occasion (beginning versus the end of the RR program). Participants' fifth reading rates for session 1 versus session 23 also increased significantly with $p = .000$ and eta^2 effect size = .734, suggesting that within RR sessions at the beginning and end of the program, participants' reading rates increased. Having participants read five times for each session was just as effective at the end of the study as it was at the beginning of the study. Table 3 below shows changes in participants' comprehension of the test text.

Table 3. Descriptive statistics for pre-and post-test percent of propositions recalled

	Pre-test	**Post-test**
M	6.09%	33.11%
SD	6.2	10.35
Min	0%	21%
Max	14%	50%

At the beginning of the semester, participants' comprehension after the fifth reading of the test text was sparse, with recalls on average of only 6.09% of 15 possible total propositional units (one participant recalled nothing and one recalled 21%). By the end of the 23 RR treatments, however, participants comprehended more of the same test text at an average of 33.11%. The lowest scoring participant recalled 14% of all propositions while the highest scoring recalled 50%. The difference between mean recall scores was significant with $p = .000$, and eta^2 effect size = .819, meaning that nearly 82% of the variance of the difference was due to occasion, i.e., participants taking the test at the beginning of the semester versus taking the test after the 23 RR treatments.

For RQ #2, an overall tally of participants' comments, organized into themes, is given in Table 4, along with example participant comments.

Table 4. Tally of Participants' Comments by Theme with Examples

Themes focused on RR method
Method helps comprehension Frequency = 22 *As I was reading I was trying to comprehend what the reading was about. My comprehension went up the more times I read the story.*
Method helps reading speed Frequency = 7 *I also found the more I read the story, the faster I read it.*
Method helps comprehension and reading speed Frequency = 6 *My reading comprehension did change as I did the task. The second time I was able to understand the story better and get through it faster with 3rd and 4th times.*
Method helps decoding characters or words or text Frequency = 3 *I was mainly focused on reading all the hiragana correctly. But after the second I started to wonder what was being said in the story.*
Method with audio support helps reading speed Frequency = 1 *After it was read to us as I was able to read a lot quicker, so I tried to work on that.*
Method with audio support helps comprehension Frequency = 15 *Hearing XXX-sensei helped, as usual. Reading through the story last two times was easier, and I comprehended a lot more.*
Method with audio support helps comprehension and reading speed Frequency = 2 *The last time I read through I was trying to understand each word. After sensei read, I just read as fast as I could and my times improved a lot, while still being able to comprehend the story, but I will say that when sensei read it, it makes even more sense listening to him.*
Method with audio support helps decoding characters or words or text Frequency = 24 *After sensei read it over twice, I was able to finally read the passage without mistakes or having to repeat any words. I was also able to read the hiragana well and felt confident in my understanding of how the actual words should sound.* *After hearing sensei read the story I had an even better understanding of the sounds of the words rather than the individual sounds put together. In that way I was able to read words instead of just the individual letters.*
Method with audio support helps decoding characters or words or text and comprehension Frequency = 12 *The first time through, I wasn't comprehending too much and was just hearing the syllables in my head. After teacher read it the first time out loud, the words came together and I understood a little bit more. By the last reading, I felt I had a good grasp of the story.*
Method with audio support improves pronunciation Frequency = 4 *I was thinking that I didn't know some of the words the first time or how to pronounce them. After the second time reading I could pronounce the words better and didn't struggle so much.*
Method with audio support helps awareness of language rhythm Frequency = 1 *What I was thinking while reading this (besides poor おじいさん and おばあさん) was that reading while maintaining a rhythm really does help me read the story better, especially after reading it the first time. The reading helps me establish the feeling of the rhythm, hearing sensei read then helps me adjust the rhythm to one that works best for the reading.*

Method with teacher explanation helps reading speed Frequency = 1
Of course there were a few words in there that I didn't know what they meant, but after sensei explained what those words meant it was a lot easier to read the text. I didn't have to stop and think about what those words could have meant after he explained them, which in turn, improved my time. Not only was the reading easier to read but it made much more sense without the blanks of the unknown words.

Method with teacher explanation helps comprehension Frequency = 13
I was also kind of choppy in my head. After XXX-sensei explained a few, I understood the whole story. The words flowed in my head a lot smoother than the last two readings.

Learner uses strategies to comprehend while engaged in RR (i.e., using the context to infer the meaning of unknown words, generating questions to comprehend the story, monitoring comprehension, monitoring character or word decoding, etc.) Frequency = 27
During the first reading, I was surprised to find that, with the help of context clues, I could understand practically all of the text. The colors stood out to me first, then the nouns they described. By the end of the reading, the only word I didn't recognize was the verb used to go with the pig.

Awareness of reading times Frequency = 7
My first reading was slowest, my second and third were equal.

Comprehended first reading of a new passage Frequency = 10
I was able to understand most of the story the first time I read it.

Method helps reader's awareness that they are growing as a reader Frequency = 8
I am still getting faster at reading through the stories, which is really good for me since I am not very fast at reading in Japanese at all. I really like that I am improving my reading skills even if I don't understand the story all the time.

Frustrations during RR Frequency = 3
I feel like the more we do these RR exercises, the easier it becomes to read the story, but the harder it is to write about it. How do I feel after reading this particular story? The same way I have felt every time accomplished, yet also discouraged about how much I still don't know.

Themes in which longitudinal changes in reading or language ability are described but RR is not directly cited

Changes in reading speed Frequency = 1
My reading speed seems to be getting better nonetheless, so this is encouraging.

Changes in reading comprehension Frequency = 6
I am starting to comprehend more of the story as my vocabulary grows.

Changes in reading speed and comprehension Frequency = 1
I was able to read it faster and understand more.

Changes in reading speed and ability to recognize word boundaries Frequency = 1
Reading speed certainly improved but it didn't feel so much like comprehension as the ability to differentiate words from one another.

Changes in ability to decode characters or words or text Frequency = 8
Japanese grammar and sentence structure is becoming easier to comprehend for me. More times than not I can pick out which word is the subject of the sentence and which is a verb or adjective.

Changes in ability to decode characters or words or text and comprehend Frequency = 4
What was running through my mind while reading this story was that it is getting easier and easier for me to read without taking awkward pauses or having to stop to try and remember the Hiragana. I could also focus more on the story than the Hiragana and actually get what the story was about before sensei told us, or helps us with some of the words we didn't know.

Use of comprehension strategies (i.e., ability to use context, etc.) increased Frequency = 4
I've noticed a real trend also. Words I do not know are getting easier to figure out with context clues and by using what I do know. I'm amazed with how much I have learned already. I am more confident with my Japanese than I have been for a long time.

Learned new vocabulary Frequency = 2
However, with every story I learn at least one new word, which is always an accomplishment. The more I learn, the more I will be able to say がんばって！

Reader's awareness that they are growing as a reader Frequency = 14
Every week I feel myself growing more and more as a Japanese reader. I feel more confident. It's exciting.

Themes in which the reader is focused on

Learner uses strategies to comprehend (i.e., using context to infer the meanings of unknown words, generating questions to comprehend the story, monitoring comprehension, monitoring decoding, planning, etc.) Frequency = 125
As I was reading I was thinking that こぶたん *had something to do with the pig. I also spent a lot of time trying to translate* みえた *in my head but didn't come up with anything until the word was explained. I realized* うたいます *from our most recent vocab.*

Lack or vocabulary, or character or word recognition hampers comprehension Frequency = 9
Vocabulary? Curse vocabulary! That is what makes these stories so hard to understand. The sentence structure is easy enough but there are so many words I just don't know.

Remembered/known vocabulary increases reading speed Frequency = 1
During the first reading I recognized many of the words from the last reading, therefore I was able to read the passage faster than I would have otherwise.

Remembered/known vocabulary aids comprehension Frequency = 11
Understanding seemed easier because of what we learned last reading. There were a number of words I had already learned, as well.

Names known characters or words or vocabulary Frequency = 7
Words I knew were asa (morning), minna (everyone), + wa (circle).

Names unknown characters or words or vocabulary Frequency = 7
*I was able to comprehend a majority of the story, with the exception of a word that I didn't know (*ふたり*). It used* みんな *twice but I couldn't really place that either.*

Names characters or words or vocabulary learned Frequency = 6
I did not comprehend well, but learned the word for circle わ

Learner goal setting Frequency = 6
One problem I have with language learning is that I want to just be able to read so that I do not embarrass myself. I really need to focus more on understanding.

Awareness of reading speed and comprehension Frequency = 10
This one took me a little longer than usual to read. My comprehension was pretty good for this one though.

Teacher explanation of vocabulary helps comprehension Frequency = 21
What I did get was because XXX-sensei defined some words. For example, I understand now that a warm breeze blew.

Themes in which the story is focused on

Comments on length of text Frequency = 6
What I thought about as I was reading was that the story was short and simple.

Story was easy to read Frequency = 34
I found this story a lot easier to read compared to the first two readings.

Story was not easy to read Frequency = 16
This story was a little hard for me. There were no repeated words, the exception being ながい. As I stated in one of the previous readings repeated words can make the story easier to read.
This story was hard, bro. Too much vocabulary, man.

Recognizes genre or formal elements of a previous text Frequency = 17
It was easier to read this example from the very first time around because I have become a little more familiar with the layout of the stories-words are generally grouped together with particles and have spaces in between groups.

Comments on genre or other formal element of the present text Frequency = 14
I did not understand much of the story other than it was about children. My guess is it was a children's nursery rhyme.

Summarizes story Frequency = 36
A brief summary would be kids dancing in the light of a spring morning, I think.

Enjoyed story Frequency = 16
I really liked this story.

Story supports language learning Frequency = 8
This story helped me remember colors like white (しろい), blue (あおい), red (あかい), and green (みどり).
Also, I really liked how the story used vocab we already knew, but in a new form, so that I can learn to recognize words in different forms.

Themes Focused on RR Method

The most frequent comments touched on RR helping comprehension, whether in general (22 times) or through some specific feature of RR such as audio supported reading (15 times) or teacher explanation after the first silent reading (13 times). As one participant commented after session 2, "by the end of the third reading, I comprehended about 90% of the story. That was far better than the 15-20% I understood after the first reading." Participants frequently mentioned using comprehension strategies while engaged in RR (27 times), and that they comprehended the first reading of a new, unpracticed passage (10 times).

Some comments connected the audio supported reading in RR with one insight as to how RR helps comprehension in that participants reported that repetitions and audio support helped their decoding of characters, words, and text *and* their comprehension (12 times). As one participant said in session 17:

> From the start I could understand several words and I could read them as whole words without actually sounding out every word…other words I couldn't read fully until sensei read them aloud. In the end I understand the meaning of the passage as well as the individual words.

We think that learner was able to confirm that he or she already knew a word in *hiragana* and could process it visually (quickly) without the need to sound it out. For unknown words, the repetition and audio support would create a visual and phonological model (2nd reading) and then a repeated model or confirmation (3rd reading) for how a word should look and sound. Because decoding characters in a writing system different than a learners' L1 would be very resource-demanding, such a learner would always struggle to have enough attentional resources freed up to concentrate on recognizing words and then assigning meaning to them using existing knowledge (i.e., comprehending), unless they had a way to build up automaticity in decoding. In this case, the participant's comment suggests the repetitions coupled with audio support created those automaticity-building opportunities. We suggest he or she comprehended more because he or she freed up sufficient attentional resources to do so.

Participants also commented that RR helped them decode characters, words, and text but without mentioning comprehension (3 and 24 times). Participants reported that RR improved their reading speed (1, 1, and 7 times) while others reported simultaneous improvements in reading speed *and* comprehension (7, 6, and 2 times). In session 5, one participant commented "I was able to understand lots of this story as well as able to improve my time by a substantial amount each time I read it," confirming the quantitative findings in the study (Tables 2 and 3). While engaged in RR, participants reported being aware of their reading times and changes from 1st to 2nd, etc. repetitions (7 times) even though reading faster was never encouraged by the teacher. And while some participants reported feelings of frustration using RR (3 times), others felt that using RR helped them become aware of their growth as Japanese readers (8 times). In session 3, one participant said "I can see that my reading has been slowly improving each time we do this exercise." These responses taken altogether suggest that RR is useful to develop L2 readers' fluency by developing automaticity (speed and accuracy) in decoding *hiragana* characters and words, thus freeing attentional resources for comprehension processes.

Themes Focused on Longitudinal Changes in Reading or Language Ability

Participants' comments in this category focused on longitudinal changes without reference to RR, but seemed to suggest that as participants engaged in the program over time they felt they were growing as Japanese readers (14 times). They felt that their ability to decode *hiragana* improved (8 times), as did their comprehension (6 and 4 times). In session 6 one participant said "It was a good feeling indeed to be reading along for the first reading no less, and to have everything translate automatically instead of having to pause to think." Participants noted awareness of their using comprehension strategies more over time (4 times) and that they were learning new vocabulary (2 times). As will be seen again below, participants felt that vocabulary played a significant role in their comprehension and growth as readers (note the example comment

under “changes in reading comprehension” which notes vocabulary growth as one engine of increased comprehension: “I am starting to comprehend more of the story as my vocabulary grows.”). Participants felt their reading speed was increasing (one and one time) as was their reading speed *and* comprehension (1 time). In particular, one participant in session 1 posited an early dividend of the RR program, which was to differentiate words as a basis for his or her increase in reading speed as in “reading speed certainly improved but it didn’t feel so much like comprehension as the ability to differentiate words from each other.” This longitudinal information suggests the efficacy of a semester-long reading fluency program to improve decoding and comprehension skills for texts written in an unfamiliar writing system, and for developing independent readers of those texts.

Themes Focused on the Reader and Their Experiences

A significant theme was participants’ frequent self-reports of using a wide variety of reading strategies to comprehend the texts (125 times). Without discussion class about reading strategies, participants seemed nonetheless adept at monitoring their comprehension, using a variety of clues to infer meaning, and planning strategy use. This included being able to use *hiragana* to notice grammar, *hiragana*’s main function in authentic texts. In session 7, one participant said “It was interesting that one of the verbs used a new conjugation. I plan to look into that form so that I can learn it early.”

Vocabulary reappeared as a major component of comprehension in participants’ minds, where lack of vocabulary was seen as hampering comprehension (9 times) but where known or remembered or explained vocabulary *increased* comprehension (1, 11, and 21 times). Of particular interest was where participants named, after the session was over and the treatment texts of the day were taken away, *hiragana* characters or words, or vocabulary that either they already knew (7 times), did not know previous to the RR session of the day (7 times), or had learned from the session itself (6 times). The fact that learners could take this information and process it in working memory, and then report on it after the fact suggests the texts were sources of input. Finally, in two themes, participants suggested additional agency as language learners (in addition to mentions of reading strategy use) where they saw a connection between reading speed and comprehension (10 times, for instance session 14 “This time I took the first reading much slower so that I could understand the words rather than just read them.”), and mentioned creating personalized learning goals (6 times). These themes bring to the fore how strong is the self-guiding drive of adult language learners to comprehend what they read.

Themes in Which the Stories are Focused on

Some participants summarized the story (36 times), which suggested comprehension of the texts. Complementing this theme were participants’ comments that the texts were easy to read (34 times), while other texts were not easy because of unfamiliar vocabulary (16 times). The short length of the texts were cited as one reason for a text to be easy to read (6 times) but other features of the texts seemed to contribute to their easiness, including participants’ recognition of genre or formal elements of a previous text in the RR program (17 times) or something they had read in their L1 (14 times). In session 15 one participant mentioned “It has also become a lot easier to understand when a word is an onomanopeia [sic] than before, because throughout the series there was a lot.” That this participant became familiar with onomatopoeia (with RR providing a visual

and phonological model) meant an apparent fluency gain in his or her lower-order identification processes.

Of significance to the authors, participants reported enjoying the texts (16 times) and that the texts supported participants' learning (8 times). These comments suggest the importance of choosing texts for reading fluency programs that are relatively easy and that contain narratives and themes and characters that extend over several sessions. The comments also suggest that authentic texts may be used in reading fluency programs. It is true that elements of authentic texts may be difficult for learners because they contain unfamiliar cultural references and unpredictable vocabulary. But it is also true that these participants, using their fully formed cognitive abilities as adults, were able to piece together an understanding *and appreciation of* the texts.

DISCUSSION

In our time series design, our quantitative data revealed faster reading rates and better comprehension (Tables 2 and 3, Figure 1). This finding was supported by our qualitative data, which added explanatory detail from participants' experiences using RR (Table 4). With three months between the comprehension pre- and post-test (Table 3), participants could not have used their memories to recall the text content. Further, if participants could recall very little of the text at the pre-test stage (M = 6.09%), how could they memorize a text they could not comprehend? Because participants did not practice sustained reading in their regular class sessions, we suggest the RR was responsible for the increases in learners' reading times and comprehension. Even as participants could read faster on new, unpracticed texts at the end of the semester, they also comprehended more. This supports the causal link between faster and more accurate lower-order text decoding and better comprehension specified in Automaticity Theory, which underpins RR. This also confirms results from a study using RR with L2 learners (Gorsuch & Taguchi, 2008) in which a control group was used.

Comprehension as a Dominant Theme

The dominant theme, whether participants focused on the RR method, longitudinal changes, their responses to texts as readers, or the texts themselves, was comprehension. We suggest that 1. College-level learners have adult cognition that can be usefully brought to bear in comprehending authentic L2 texts (e.g., Swaffar & Arens, 2005), and 2. RR may provide a significant experiential platform for learner development of reading comprehension strategies. We note that participants' comments arose spontaneously. With each repetition, participants noticed more of the text, which presented them with unfolding layers of meaning *and form* to consider on an individual basis, whether a concern with a puzzling grammar point, questions over vocabulary, or noticing an aspect of culture.

It may seem obvious to state how important it is to learners as self-regulating, goal-seeking individuals to comprehend L2 texts, but we are concerned this may reinforce the common practice of presenting to learners contrived, overly glossed, only-vocabulary-and-grammar-from-the-chapter, etc. texts which seem more designed for instructional expediency and a lack of tolerance for the perplexity so often experienced by language learners. We think a better scenario is selecting authentic texts that are reasonably easy, and asking learners to regularly interact with the texts in such a way as to support fluency building (we suggest RR as a candidate for this). We note that

RR sessions were done twice a week in a class that met five days per week, and that each RR session lasted only 20 minutes. It is a small investment to make, which has large returns.

Decoding as a Route to Word Meaning Recognition and Comprehension

We believe participant comments point to the basis of increased reading speed and comprehension, that of participants' growing efficiency in decoding *hiragana* characters and recognizing words while using RR (see Table 4). If participants could not decode and recognize words in text, they would not have the attentional resources to invoke the comprehension processes they describe in their comments. We think that fast and accurate word meaning recognition is a significant issue for L2 learners struggling to develop their reading fluency. We agree that efficient word meaning identification is not the sole foundation of good reading comprehension (note participants' comments on noticing and using grammar to comprehend) and concur that higher-order comprehension skills facilitate comprehension (e.g., Anderson & Pearson, 1984; Carrell & Eisterhold, 1983). However, speed and accuracy in the lower-level processes of reading (including word identification) are key because it is unlikely that good readers lack well-developed word recognition skills (e.g., LaBerge & Samuels, 1974; Perfetti, 1985; Samuels, 2004, 2006; Segalowitz & Segalowitz, & Wood, 1998). Thus, we think developing Japanese language learners' *hiragana* character and word decoding fluency with extended texts is a worthy goal.

Practical Suggestions for Implementing an RR Program

We found that with this group of learners, a semester-long, twice-weekly program worked well. Five repetitions for reading the text also worked well, with the 2nd and 3rd repetitions used for audio supported RR. The instructor simply read the texts aloud at a normal pace. Accumulated experience with RR has suggested that learners have the most questions on vocabulary after the 1st silent reading and that explanations or glosses given out at the time are the most effective. What we wish to avoid is too many glosses and too many things for learners to pay attention to *other than reading continuous text* during their 1st reading. We think that if learners are left alone while actually reading, they can formulate what they wish to know once a reading repetition is over and a forum for questions is provided.

We have concluded over our years of working with RR for L2 learners that the best texts for fluency building are relatively easy, have a narrative structure, and are engaging for learners (Gorsuch & Taguchi, 2009). We suggest looking at elementary school textbooks with recurring-theme narratives and pictures, which can be segmented into 30-100 word texts. One might then show some of the texts to learners at or just above the level of learners the texts are to be used with for fluency building and ask them to rate the texts for difficulty or interest. In our first RR sessions we monitored the post-session reports of participants carefully. While it was clear the texts were challenging to learners we also sensed they were comprehending enough to continue the treatments. If learners were struggling too much for only limited comprehension we would have stopped the treatments and found texts even easier.

CONCLUSION

We found that asking beginning-level Japanese language learners to engage in two 22 audio-supported RR treatments twice a week for 14 weeks resulted in their reading authentic elementary school texts more fluently. We speculated, based on learners' comments, that their improved *hiragana* character and word decoding skills seemed to contribute to better word meaning recognition and thus better comprehension. Learners also reported feeling confident about their growing abilities as Japanese L2 readers, and appreciated their growing experience with the themes, vocabulary, and grammar of Japanese narratives. We think L2 reading fluency is a worthy goal to pursue in language programs and that more attention be paid to having learners read easy, authentic texts as a viable source of L2 input.

Greta Gorsuch is a professor of applied linguistics at Texas Tech University, U.S.A. She is interested in reading and speaking fluency, materials design, testing, and evaluation research.
Email: greta.gorsuch@ttu.edu

Etsuo Taguchi is a professor at Daito Bunka University in Tokyo, Japan. He is currently interested in the relationship between lower identification skills and reading comprehension in L2 reading.
Email: taguchi@ic.daito.ac.jp

Hiroaki Umehara is an instructor at Rikkyo University, Japan. His research interest lies in conversation analysis, materials development, language pedagogy, and teacher training.
Email: humehara0324@rikkyo.ac.jp

REFERENCES

Akamatsu, N. (1999). The effects of first language orthographic features on word recognition in English as a second language. *Reading and Writing: An Interdisciplinary Journal*, *11*(4), 391-403.

Akita, K., & Hatano, G. (1999). Learning to read and write in Japanese. In M. Harris & G. Hatano (Eds.), *Learning to read and write: A cross linguistic perspective* (pp. 214-234). Cambridge, UK: Cambridge University Press.

Al-Homoud, F., & Schmitt, N. (2009). Extensive reading in a challenging environment: A comparison of extensive and intensive reading approaches in Saudi Arabia. *Language Teaching Research*, *13*(4), 383-401.

Allen, H. (2009). In search of relevance: The *Standards* and the undergraduate foreign language curriculum. In V. Scott (Ed.), *Principles and practices of the* Standards *in college foreign language education* (pp. 38-52). Boston, MA: Heinle.

Amer, A. (1997). The effect of the teacher's reading aloud on the reading comprehension of EFL students. *ELT Journal*, *51*(1), 43-47.

Anderson, N. J. (1999). *Exploring second language reading: Issues and strategies.* Boston, MA: Heinle & Heinle.

Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading comprehension. In P. D. Pearson (Ed.), *Handbook of reading research* (pp. 255-292). New York, NY: Longman.

Bell, T. (2001). Extensive reading: Speed and comprehension. *Reading Matrix*, *1*(1), 3-15.

Bernhardt, E. (1991). *Reading development in a second language: Theoretical, empirical, and classroom perspectives*. Norwood, NJ: Ablex Publishing Corporation.

Bernhardt, E. (1995). Teaching literature or teaching students? *ADFL Bulletin*, *26*(2), 5-6.

Bernhardt, E. (2011). *Understanding advanced second-language learning*. New York, NY: Routledge.

Bochner, J., & Bochner, A. (2009). A limitation on reading as a source of linguistic input: Evidence from deaf learners. *Reading in a foreign language*, *21*(2), 143-158.

Byrnes, H. (2001). Reconsidering graduate students' education as teachers: "It takes a department!" *The Modern Language Journal*, *85*(4), 512-530.

Carrell, P. L., & Eisterhold, J. C. (1983). Schema theory and ESL reading pedagogy. *TESOL Quarterly*, *17*(4), 553-573.

Chang, A. (2010). The effect of a timed reading activity on EFL readers: Speed, comprehension, and perceptions. *Reading in a Foreign Language*, *22*(2), 284-303.

Chen, Y. M. (2006). Using children's literature for reading and writing stories. *Asian EFL Journal*, *8*(4). Retrieved February 24, 2011 from http://www.asian-efl-journal.com/Dec_06_ymc.php

Cirocki, A. (2009). The place and role of literary texts in language education: A historical overview. In A. Cirocki (Ed.), *Extensive reading in English language teaching* (pp. 157-170). Munich, Germany: Lincom Europa.

Day, R., & Bamford, J. (1998). *Extensive reading in the second language classroom*. New York, NY: Cambridge University Press.

Dornyei, Z. (2001). *Teaching and researching motivation*. Harlow, UK: Longman.

Eskey, D. E. (1986). Theoretical foundations. In F. Dubin, D. Eskey, & W. Grabe (Eds.), *Teaching second language reading for academic purposes* (pp. 3-23). Reading, MA: Addison-Wesley Publishing Company.

Favreau, M., & Segalowitz, N. (1982). Second language reading in fluent bilinguals. *Applied Psycholinguistics*, *3*(4), 329-341.

Fujigaki, E. (2009). Addressing students' output in the extensive reading class: A qualitative study. In A. Cirocki (Ed.), *Extensive reading in English language teaching* (pp. 577-589). Munich, Germany: Lincom Europa.

Fukai, M. (2005). Meeting the *Standards for Foreign Language Learning* through an internet-based newspaper project: Case studies of advanced-level Japanese learners. *Journal of the National Council of Less Commonly Taught Languages*, *2*, 101-134.

Fukkink, R., Hulstijn, J., & Simis, A. (2005). Does training in second-language word recognition skills affect reading comprehension? *The Modern Language Journal*, *89*(1), 54-75.

Gebhard, J. G. (1996). *Teaching English as a foreign or second language*. Ann Arbor, MI: University of Michigan Press.

Gorsuch, G.J. (2009). Investigating second language learner self-efficacy and future expectancy of second language use for high stakes program evaluation. *Foreign Language Annals*, *42*(2), 505-540.

Gorsuch, G.J. & Taguchi, E. (2008). Repeated reading for developing reading fluency and reading comprehension: The case of EFL learners in Vietnam. *System, 36*(2), 253-278.

Gorsuch, G.J. & Taguchi, E. (2009). Repeated reading and its role in an extensive reading program. In A. Cirocki (Ed.) *Extensive reading in English language teaching* (pp. 249-271). Munich, Germany: Lincom.Europa.

Gorsuch, G. J. & Taguchi, E. (2010). Developing reading fluency and comprehension using repeated reading: Evidence from longitudinal student reports. *Language Teaching Research, 14*(1), 27-59.

Grabe, W. (2009a). Epilogue: Reflections on second language reading research and instruction. In Z. Han & N. Anderson (Eds.), *Second language reading research and instruction* (pp. 192-205). Ann Arbor, MI: The University of Michigan Press.

Grabe, W. (2009b). *Reading in a second language*. Cambridge, UK: Cambridge University Press.

Grabe, W. (2010). Fluency in reading: Thirty-five years later. *Reading in a Foreign Language*, *22*(1), 71-83.

Grabe, W., & Stoller, F. L. (2011). *Teaching and researching reading* (2nd ed.). Harlow, UK: Longman.

Graham, S. (2006). A study of students' metacognitive beliefs about second language study and their impact on learning. *Foreign Language Annals*, *39*(2), 296-309.

Green, D. W., & Meara, P. (1987). The effects of script on visual search. *Second Language Research*, *4,* 102-117.

Griffee, D. T. (2012). *An introduction to second language research methods: Design and data*. Berkeley, CA: TESL-EJ Publications.

Han, Z. H., & Chen, C. A. (2010). Repeated-reading-based instructional strategy and vocabulary acquisition: A case study of a heritage speaker of Chinese. *Reading in a Foreign Language*, *22*(2), 242-262.

Hanley, J. R., Tzeng, O., & Huang, H. S. (1999). Learning to read Chinese. In M. Harris & G. Hatano (Eds.), *Learning to read and write: A cross linguistic perspective* (pp. 173-195). Cambridge, UK: Cambridge University Press.

Haynes, M., & Carr, T. H. (1990). Writing system background and second language reading: A component skills analysis of English reading by native speaking-readers of Chinese. In T. H. Carr & B. A. Levy (Eds.), *Reading and its development: Component skills approaches* (pp. 375-421). San Diego, CA: Academic Press.

Huberman, A., & Miles, M. (1998). Data management and analysis methods. In N. K. Denzin & Y. S. Lincoln (Eds.), *Collecting and interpreting qualitative materials* (pp. 179-210). Thousand Oaks, CA: Sage.

Jensen, L. (1986). Advanced reading skills in a comprehensive course. In F. Dubin, D. E. Eskey, & W. Grabe (Eds.), *Teaching second language reading for academic purposes* (pp. 103-124). Reading, MA: Addison-Wesley.

Katz, L., & Frost, R. (1992). Reading in different orthographies: The orthographic depth hypothesis. In R. Frost & L. Katz (Eds.), *Orthography, phonology, morphology, and meaning* (pp. 67-84). Amsterdam: Elsevier.

Kern, R. (2003). Literacy as a new organizing principle for foreign language education. In P. C. Patrikis (Ed.), *Reading between the lines: Perspectives on foreign language literacy* (pp. 40-59). New Haven, CT: Yale University Press.

Kern, R. (2008). Making connections through texts in language teaching. *Language Teaching*, *41*(3), 367-387.

Koda, K. (1988). Cognitive process in second language reading: Transfer of L1 reading skills and strategies. *Second Language Research*, *4*(2), 133-156.

Koda, K. (1989). The effects of transferred vocabulary knowledge on the development of L2 reading proficiency. *Foreign Language Annals*, *22*(6), 529-542.

Koda, K. (1992). The effects of lower-level processing skills on FL reading performance: Implications for instruction. *Modern Language Journal*, *76*(4), 502-512.

Koda, K. (1996). L2 word recognition research: A critical review. *The Modern Language Journal*, *80*(4), 450-460.

Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach*. New York, NY: Cambridge University Press.

Krashen, S. (1995). Free voluntary reading: Linguistic and affective arguments and some new applications. In F. Eckman, D. Highland, P. Lee, J. Mileham, & R. Weber (Eds.), *Second language acquisition theory and pedagogy* (pp. 187-202). Mahwah, NJ: Lawrence Erlbaum Associates.

Kurihara, K. (1992). *Kokugo ichi jyou kazaguruma*. Tokyo: Mitsumura Tosho Syuppan Kabushikigaisya.

LaBerge, D., & Samuels, S. J. (1974). Toward a theory of automatic information processing in reading. *Cognitive Psychology*, *6*(2), 293-323.

Macnamara, J. (1970). Comparative studies of reading and problem-solving in two languages. *TESOL Quarterly*, *4*(2), 107-116.

Muljani, D., Koda, K., & Moates, D. R. (1998). The development of word recognition in a second language. *Applied Psycholinguistics*, *19*(1), 99-113.

Naruhodo kyoukasyo. (2013). Tokyo: Mitsumura Tosho Publishing Company. Retrieved March 30, 2013 from http://www.mitsumura-tosho.co.jp/kyokasyo/syogaku/kokugo/qanda/number/01.asp

Nuttall, C. (1982). *Teaching reading skills in a foreign language*. London, UK: Heinemann Educational Books.

O'Donnell, M. (2009). Finding middle ground in second language reading: Pedagogic modifications that increase comprehensibility and vocabulary acquisition while preserving authentic text features. *The Modern Language Journal*, *93*(4), 512-533.

Oller, J. W., & Tullius, J. R. (1973). Reading skills of non-native speakers of English. *International Review of Applied Linguistics*, *11*, 69–79.

Perfetti, C. (1985). *Reading ability.* New York, NY: Oxford University Press.

Redfield, M. (1999). Massive input through *eiga shosetsu*: A pilot study with Japanese learners. *JALT Journal*, *21*(1), 51-65.

Riley, G., & Lee, J. (1996). A comparison of recall and summary protocols as measures of second language reading comprehension. *Language Testing*, *13*(2), 173-189.

Rivera, G., & Matsuzawa, C. (2007). Multiple-language program assessment: Learners' perspectives on first- and second-year college second language programs and their implications for program improvement. *Foreign Language Annals*, *40*(4), 569-583.

Ryan, A., & Meara, P. (1991). The case of invisible vowels: Arabic speakers reading English words. *Reading in a Foreign Language*, *7*(2), 531-540.

Samuels, S. J. (1994). Toward a theory of automatic information processing in reading, revisited. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th ed.) (pp. 816-837). Newark, DE: International Reading Association.

Samuels, S. J. (2004). Toward a theory of automatic information processing in reading, revisited. In R. B. Ruddell & N. J. Unrau (Eds.), *Theoretical models and processes* (pp. 1127–1148). Newark, DE: International Reading Association. doi:10.1598/0872075028.40

Samuels, S. J. (2006). Reading fluency: Its past, present, and future. In T. Rasinski, C. Blachowicz, & K. Lems (Eds.), *Fluency instruction: Research-based best practices* (pp. 7–20). New York, NY: Guilford.

Schulz, R. (2006). Reevaluating communicative competence as a major goal in postsecondary language requirement courses. *The Modern Language Journal*, *90*(2), 252-255.

Segalowitz, N. (2003). Automaticity and second language acquisition. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 382–408). Oxford, UK: Blackwell.

Segalowitz, N., Poulsen, C., & Komoda, M. (1991). Lower level components of reading skill in higher level bilinguals: Implications for reading instruction. *AILA Review*, *8*, 15-30.

Segalowitz, S., Segalowitz, N., & Wood, A. (1998). Assessing the development of automaticity in second language word recognition. *Applied Psycholinguistics*, *19*(1), 53-67.

Stanovich, K. E. (1991). Changing models of reading and reading acquisition. In L. Rieben & C. A. Perfetti (Eds.), *Learning to read: Basic research and its implications* (pp. 19-31). Hillsdale, NJ: Lawrence Erlbaum Associates.

Stanovich, K. E. (1992). The psychology of reading: Evolutionary and revolutionary developments. *Annual Review of Applied Linguistics*, *12*, 3-30.

Swaffar, J. (2006). Terminology and its miscontents: Some caveats about communicative competence. *The Modern Language Journal*, *90*(2), 246-249.

Swaffar, J. & Arens, K. (2005). *Remapping the foreign language curriculum: An approach through multiple literacies*. New York, NY: Modern Language Association.

Taguchi, E., Gorsuch, G., and Sasamoto, E. (2006). Developing second and foreign language reading fluency and its effect on comprehension: A missing link. *Reading Matrix, 6*(2), 1-18. http://www.readingmatrix/archives/archives_vol6_no2.html

Taguchi, E. & Gorsuch, G.J. (2002). Transfer effects of repeated EFL reading on reading new passages: Silent reading rate and comprehension. *Reading in a Foreign Language*, 14(1), 1-18 [On-line]. Available: http://nflrc.hawaii.edu/rfl/April2002/taguchi/taguchi.html

Taguchi, E. & Gorsuch, G.J. (2012). Fluency instruction in reading in a second or foreign language. In T. Rasinsky, C. Blachowicz, & K. Lems (Eds.) *Fluency instruction: Research-based best practices* (2nd ed.)(pp. 255-288). New York: The Guilford Press.

Taguchi, E., Gorsuch, G., and Sasamoto, E. (2006). Developing second and foreign language reading fluency and its effect on comprehension: A missing link. *Reading Matrix, 6*(2), 1-18. http://www.readingmatrix/archives/archives_vol6_no2.html

Taguchi, E., Takayasu-Maas, M., & Gorsuch, G.J. (2004). Developing reading fluency in EFL: How assisted repeated reading and extensive reading affect fluency development." *Reading in a Foreign Language*, *16*(2), 1-19 [On-line]. Available: http://nflrc.hawaii.edu/rfl/October2004/taguchi/taguchi.html

Taguchi, E., Gorsuch, G., Takayasu-Maass, M. & Snipp, K. (2012). Assisted repeated reading with an advanced-level Japanese EFL reader: A longitudinal diary study. *Reading in a Foreign Language, 24*(1), 30-55. Available: http://nflrc.hawaii.edu/rfl/April2012/

Tanaka, H., & Stapleton, P. (2007). Increasing reading input in Japanese high school EFL classrooms: An empirical study exploring the efficacy of extensive reading. *The Reading Matrix*, *7*(1), 115-131.

Taylor, I., & Taylor, M. M. (1995). *Writing and literacy in Chinese, Korean and Japanese*. Amsterdam: John Benjamins Publishing Company.

Waring, R. (2009). The inescapable case for extensive reading. In A. Cirocki (Ed.), *Extensive reading in English language teaching* (pp. 93-111). Munich, Germany: Lincom Europa.

Yang, A. (2007). Cultivating a reading habit: Silent reading at school. *Asian EFL Journal*, *9*(2). Retrieved February 24, 2011 from http://www.asian-efl-journal.com/June_07_ay.php

Young, A., Bowers, P., & MacKinnon, G. (1996). Effects of prosodic modeling and repeated reading on poor readers' fluency and comprehension. *Applied Psycholinguistics*, *17*(1), 59-84.

APPENDICES

Appendix A. Japanese Version Used for the Recall Pre- and Post-Test

おかあさんねこは、ふうっと　おこって、ちいっと　おこって、犬を　おいはらった。それから、いそいで　木に　のぼった。　おかあさんねこが、木から　おりて　きた。こねこを　口に　くわえて。　じどうしゃを　よけ、　こどもの　そばを　とおりぬけ、おかあさんねこは、うちへ　かえって　いく。こねこを　口に　くわえたまま。　大きな　へやで、小さな　ねこが、おかあさんの　おっぱいを　のんで　いる。

Appendix B. English Translation of the Recall Protocol Test Text

The mother cat got angry (huuuu…..chiiiitoooo) and chased the dog away. Then, she climbed up a tree hastily. The mother cat came down from the tree holding the kitten in her mouth. The mother cat passes around the car, cuts through the children, and she is going back home holding the kitten in her mouth. The small cat is sucking the mother's breast in a big room.

Appendix C. Repeated Reading Record Sheet
(from an actual participant, whose name has been blocked for privacy)

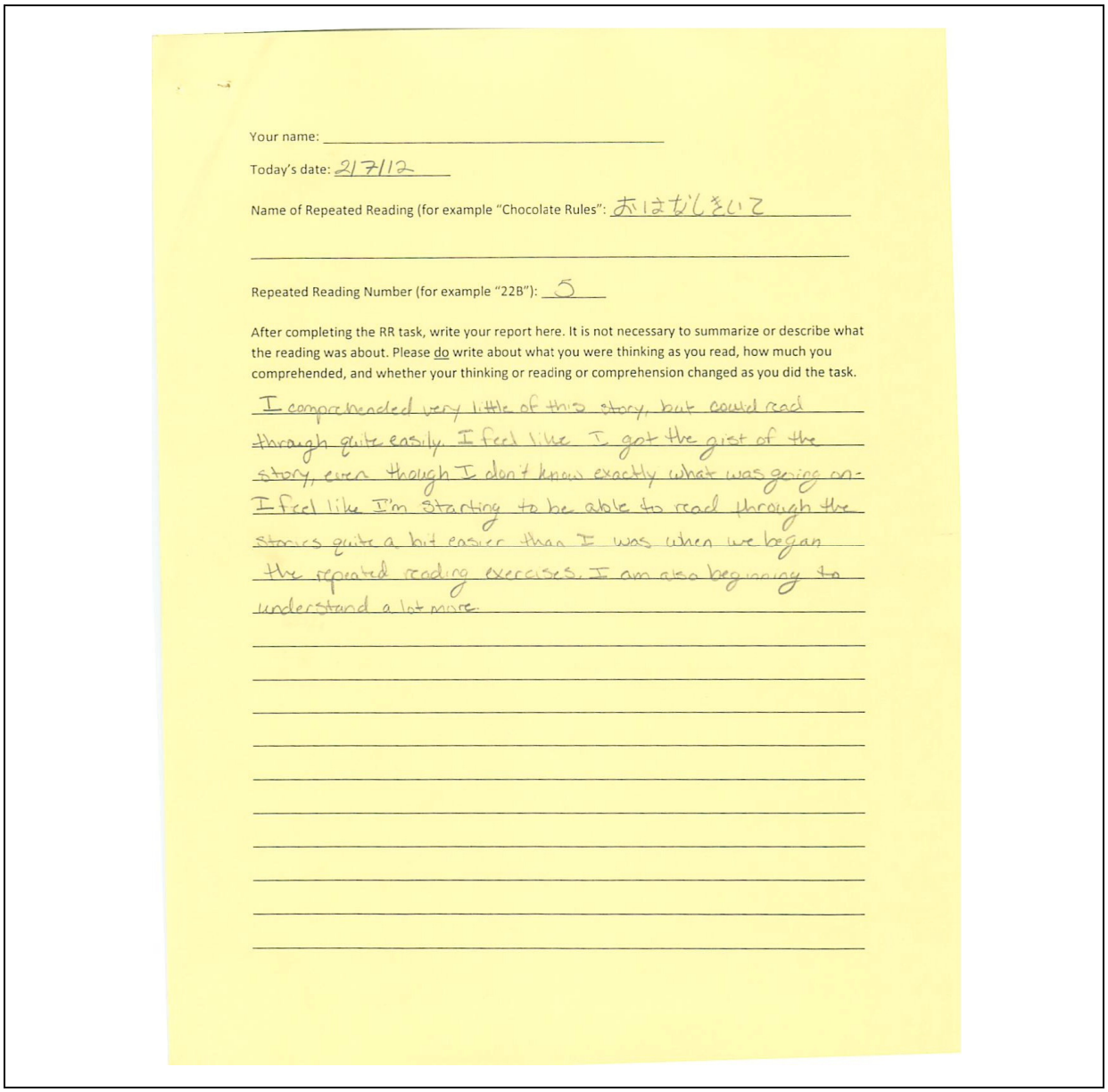
Japanese

Repeated Reading Record Sheet, Spring, 2012

Student name: [redacted]

Number of RR Session	*Example*: 3	13 十三	14 十四	15 十五	16 十六
Date	*Example:* April 1	三月八日	三月十日	三月十二日	三月十七日
Name of Story	*Example:* Putting the Squeeze on Toothpaste Part II	おむすびころりん 三	おむすびころりん 四	おむすびころりん 五	おむすびころりん六
First Reading Time	*Example:* 4 min, 22 sec	.48"94	.54"76	.57"94	.45"94
Reading with Tape (Second Reading)	*Example:* ✓				
Reading with Tape (Third Reading)	*Example:* ✓				
Fourth Reading Time	*Example:* 3 min, 39 sec	.37"27	.43"81	.37"89	.34"27
Fifth Reading Time	*Example:* 2 min, 18 sec	.24"11	.36"01	.35"39	.25"20
Writing Report	*Example:* ✓				

Appendix D. RR Post-Treatment Report
(from an actual participant, whose name has been blocked for privacy)



Your name: _____

Today's date: 2/7/12

Name of Repeated Reading (for example "Chocolate Rules": おはなしきいて

Repeated Reading Number (for example "22B"): 5

After completing the RR task, write your report here. It is not necessary to summarize or describe what the reading was about. Please do write about what you were thinking as you read, how much you comprehended, and whether your thinking or reading or comprehension changed as you did the task.

I comprehended very little of this story, but could read through quite easily. I feel like I got the gist of the story, even though I don't know exactly what was going on. I feel like I'm starting to be able to read through the stories quite a bit easier than I was when we began the repeated reading exercises. I am also beginning to understand a lot more.