

**THE EFFECTS OF EXTENSIVE READING ON READING RATE
AMONG INTERMEDIATE-LEVEL LEARNERS OF JAPANESE AS A
FOREIGN LANGUAGE**

by

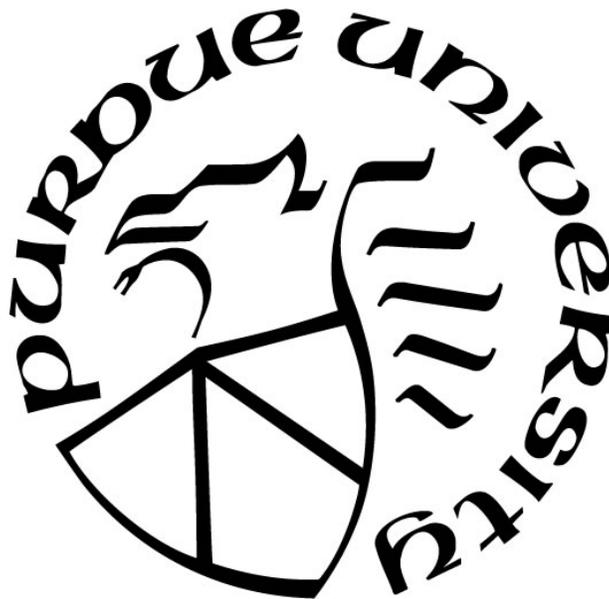
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For my family.

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LIST OF ABBREVIATIONS

ACTFL	American Council on the Teaching of Foreign Languages
AR	Audio Assisted Extensive Reading
B1	Baseline Phase 1
B2	Baseline Phase 2
B3	Baseline Phase 3
B4	Baseline Phase 4
BYU	Brigham Young University
CPM	Characters per Minute
EFL	English as a Foreign Language
ER	Extensive Reading
ESL	English as a Second Language
I	Intermediate (J-CAT level)
I1	Intervention Phase 1
I2	Intervention Phase 2
I3	Intervention Phase 3
I4	Intervention Phase 4
IH	Intermediate-High (J-CAT level)
IR	Intensive Reading
J-CAT	Japanese Computer Adaptive Test
J-LEX	An Online Lexical Analyzer of Japanese Texts
JFL	Japanese as a Foreign Language
JLPT	Japanese Language Proficiency Test
L1	First-language
L2	Second-language
NR	No Reading
OPI	Oral Proficiency Interview
PI	Pre-Intermediate (J-CAT level)
PR	Pleasure Reading

RR	Repeated Reading
SCD	Single-case Design
SLA	Second Language Acquisition
UVU	Utah Valley University
WGU	Weekly Goal Unit
WPM	Words per Minute

ABSTRACT

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Title: The Effects of Extensive Reading on Reading Rate Among Intermediate-level Learners of Japanese as a Foreign Language

Committee Co-chairs: Atsushi Fukada and Mariko Wei

Research into the effects of extensive reading (ER) in second language acquisition has surged over the past few decades. Many studies report several benefits that come from engaging in ER, including reading rate gains. However, these studies almost exclusively focus on English language learners and tend to be limited by their lack of control over how the ER treatment is conducted. Furthermore, experimental and quantitative studies that investigate the possible effects of ER on the reading skills of learners of Japanese have yet to be fully explored. The goal of this study was to investigate the possible effects of ER on the reading rate development of learners of Japanese as a foreign language. This study also aimed to examine the level of comprehension learners were able to maintain as their reading rates increased as well as the feasibility of a 12,000 character (7,200 standard word) per week reading goal. Finally, this study also surveyed learner perceptions of ER.

Using a quantitative single-case experiment design, eight intermediate-level learners of Japanese were monitored engaging in ER following strict adherence to ER principles over two and a half to four months. Longitudinal reading rate data as well as reading comprehension, ER, and survey data were collected over the course of the study. Results showed that participants' reading rates increased significantly following the ER treatment. Furthermore, participants' comprehension abilities were not hampered by an increase in their reading rates. Results also indicate that a weekly reading goal of 12,000 characters is likely feasible for intermediate-level

learners. Finally, it was found that participants had overwhelmingly positive attitudes towards ER. This study provides evidence that ER has the potential to provide a highly enjoyable activity while substantially increasing learner reading rates without hindering comprehension.

CHAPTER 1. INTRODUCTION

Over the past few decades research into the effects of extensive reading (ER: *tadoku* in Japanese) in second language acquisition (SLA) has surged. Many of these studies report a number of benefits from engaging in ER, including vocabulary acquisition (Coady, 1997; Krashen, 1989; Pigada, 2006), heightened motivation (Mason & Krashen, 1997; Robb & Susser, 1989; Taguchi, Takayasu-Maass, & Gorsuch, 2004), superior spelling (Collins, 1980; Hafiz & Tudor, 1990), enhanced reading and listening comprehension abilities (Elley, 1991; Elley & Mangubhai, 1983), as well as improved speaking, grammar, and writing abilities (Greaney, 1970; Krashen, 1989, 2004). Although these studies provide insight into the role of ER in SLA, much has focused on areas such as vocabulary acquisition (Waring & Takaki, 2003) and motivation (Takase, 2007). To a lesser degree, some studies have also reported gains in reading rates (Beglar, Hunt, & Kite, 2012; Lai, 1993). However, studies that have explored this relationship tend to focus on English language (ESL/EFL) learners (Beglar et al., 2012) or native English speaking adults (Greenberg, Rodrigo, Berry, Brinck, & Joseph, 2006).

An increasing number of pedagogical studies have reported how ER programs can be implemented in Japanese as a foreign language (JFL) classrooms and students' positive reactions to ER. However, experimental and quantitative studies that investigate the possible effects of ER on JFL learners' reading skills have yet to be fully explored. This is indicated by a recent expansive review of second-language (L2) Japanese research (Y. Mori & Mori, 2011). Their review covered over 200 empirical studies, yet only token attention was given to ER (two studies, Hitosugi and Day (2004) and Leung (2002)). Furthermore, of the ER research that has been done in the JFL context, most are qualitative in nature. As such, the present study sought to

investigate the possible effects of ER on JFL learners' reading rate using a set of eight quantitative single-case studies. This study also aimed to examine the level of comprehension learners were able to maintain as their reading rates increased as well as the feasibility of a 12,000 character (7,200 standard word) per week reading goal. Finally, this study surveyed learner perceptions of ER.

As this study mainly explored the role of ER on reading rate gains, the present study was grounded in *Rauding Theory* (Carver, 1990, 2000), as it can explain the interaction of two of the key features of ER; i.e., easy reading materials and reading rate (Yamashita, 2015). The following review of literature presents the background research that has been conducted in the areas of Rauding Theory as well as ER in both EFL/ESL and JFL contexts. Furthermore, to present more precise explanations of parts of Rauding Theory's hierarchy of reading processes, comparisons with portions of *verbal efficiency theory* (Perfetti, 1985) are discussed.

CHAPTER 2. LITERATURE REVIEW

2.1 Overview

This chapter will discuss the theoretical basis as well as previous research on the effects of extensive reading (ER) on language learning. Seeing as the present study is grounded in Rauding Theory, an explanation of its reading processes hierarchy is explained as well as the interplay of easy reading materials and reading rate. Furthermore, this chapter will examine research outlining the positive benefits from engaging in ER. These studies include those that look at gains in reading comprehension, motivation, and reading rate. The chapter ends with a discussion of the current study's research questions that were designed to show the quantitative effects of ER on the reading abilities of intermediate-level learners of Japanese as a foreign language (JFL).

2.2 Rauding Theory

Rauding Theory proposes a hierarchy of five basic reading processes (Carver, 1990, 2000; Yamashita, 2015). Those processes are scanning, skimming, rauding, learning, and memorizing. The theory posits that as one moves from scanning to memorizing, cognitive processes become more involved and reading rates slow (Yamashita, 2015). Scanning here refers to the efficient extraction of necessary information from a text as quickly as possible. Scanning is the fastest process in the Rauding Theory hierarchy and, since it includes skipping over irrelevant details, only requires lexical access (word recognition) in reading the text (cf. the first dimension of verbal efficiency theory (Perfetti, 1985)). Skimming, on the other hand, is typically a process of quickly understanding a text (finding the main idea or getting the gist of a text). This

includes identifying keywords, using skills of prediction and deduction, and passing over seemingly less critical information. Skimming requires both lexical access as well as proposition assembly¹ (Yamashita, 2015) (cf. the second dimension of verbal efficiency theory).

Rauding², a term coined by Carver (1990), refers to “what is often called natural, normal, typical, or ordinary reading” (p. 16). The term concerns the ability to read at an appropriate rate with general comprehension (Lombardino, 2011). Rauding necessitates lexical access, comprehension of each sentence’s complete thought, and proposition integration. Proposition integration here refers to the merging of meaning across sentences and throughout a text (cf. the third dimension of verbal efficiency theory). Carver affirms that rauding is the most frequently used reading process and includes reading fiction, nonfiction, magazines, and newspapers (Yamashita, 2015). Moreover, since these materials provide text that is within one’s linguistic and cognitive abilities, readers do not experience undue difficulty during the rauding process. That is, the rauding process makes use of easy materials and fluent reading. Although rauding is quick, it is not as fast as the processes of scanning and skimming as it requires one to understand the entirety of a text.

The Learning process refers to when one attempts to comprehend texts that are beyond their linguistic or cognitive abilities, or to remember specific information gleaned from a text (Yamashita, 2015). This type of reading process is typically utilized when one encounters conceptually or linguistically demanding texts such as those that are academic or occupational in nature. Learning often necessitates a close deliberate examination of a text including “careful

¹ “Proposition assembly refers to elementary encoding involving assembling a single proposition [or statement] from only a few words” (McNamara, 2007, p. 146).

² The term “rauding” is formed out of a combination of the words reading and auding (listening) (Lombardino, 2011).

interpretation, synthesis, and evaluation of the thoughts and ideas in [a] text” (Pellicer-Sánchez, 2012; Yamashita, 2015, p. 170). This may slow a reader’s process as it requires the reader to focus on reading individual words, or to frequently reread and backtrack over the same sentences and phrases throughout the text. This also means that the learning process is much slower than the previous three processes.

The fifth reading process in Rauding Theory is memorizing. Memorizing is the process by which one strives to put into memory detailed information from a text, including thoughts and ideas, so that they can be precisely recalled at a later time. Memorization is the most demanding in terms of cognitive processes and in which reading rates decrease the most (Yamashita, 2015).

This review of Rauding Theory has summarized the central points of Carver's (1990, 2000) hierarchy of reading processes. The present study is based in Rauding Theory as it explains the interaction of reading activity type and reading rate. Specifically, Rauding Theory builds a framework from which one can understand the nature of the reading processes used in ER and intensive reading (IR) (Yamashita, 2015). As the present study investigates the role of ER in learner reading rate, Rauding Theory may lend further support to the outcome of the current study as well as previous studies on ER and reading rate. Furthermore, although the current study focuses on ER, IR is also discussed in context at multiple points throughout this dissertation. IR and how it further relates to the current study is also discussed in Chapter 4 section 4.5.2 using participants’ comments taken from the post-study questionnaire.

2.3 Extensive and Intensive Reading in the Framework of Rauding Theory

Research suggests that the process of ER aligns best with the concept of rauding. This is because ER is not scanning or skimming. Although readers may need to skip over a couple words with which they may be unfamiliar (Awano, Kawamoto, & Matsuda, 2012; NPO Tadoku

Supporters, 2011), if the text has been correctly chosen (i.e., at the reader's level), the reader is not likely to skip large portions of the text. This is especially so given that ER texts are meant to be easy readers (Day & Bamford, 2002), and not meant to instigate learning or memorization processes. Day and Bamford (2002) reference ten principles of ER relative to Rauding Theory; three of these are discussed below. The following is a list of all ten ER principles.

1. The reading material is easy.
2. A variety of reading material on a wide range of topics must be available.
3. Learners choose what they want to read.
4. Learners read as much as possible.
5. The purpose of reading is usually related to pleasure, information and general understanding.
6. Reading is its own reward.
7. Reading speed is usually faster rather than slower.
8. Reading is individual and silent.
9. Teachers orient and guide their students.
10. The teacher is a role model of a reader.

The first principle of ER is “the reading material is easy” (Day & Bamford, 2002, p. 137). This is because easy reading materials lend themselves readily to rauding; (i.e., fluent reading with general comprehension (Carver, 1990; Lombardino, 2011)) as well as heightened levels of L2 reading motivation (Nishino, 2007). This is true in ER as well since another principle of ER is “the purpose of reading is usually related to pleasure, information and general understanding” (p. 138). Yamashita (2015) argues that even though the idea of general understanding is somewhat vague, in both rauding and ER, readers are not expected to understand the minute details of the text. Similarly, Carver (1990, 2000) posits that the minimum level of comprehension in rauding should be between 64% to 75%. In the context of L2 reading, however, that range may be too low for ER (Hsueh-chao & Nation, 2000; Wesche & Paribakht, 2009). A third key principle of ER is that “learners choose what they want to read” (p. 137). This principle is grounded in the idea that ER materials should be interesting to the learner. When

learners are able to choose what they read, they are more likely to be able to activate schemata, which leads to more fluent reading.

Another form of reading, IR, can also be located within the framework of Rauding Theory. IR involves the close deliberate examination of a text (Nation, 2001). This includes the assessment of grammar structures, individual words, and linking ideas. Pellicer-Sánchez (2012) suggests that IR is “effective for learning new vocabulary, particularly the form–meaning link” due to explicit attention given to individual words (p. 4). However, it is noted that, despite this, IR “will probably not lead to much depth of [vocabulary] knowledge” (p. 5). Some activities used during IR include comprehension questions, language analysis including making lists of unknown words, and (grammar) translation (Day, 2012).

Considering these typical practices, IR is most similar to the process of learning within Rauding Theory (Yamashita, 2015). Many language courses, including those with an emphasis on reading, focus on the acquisition of new linguistic knowledge. These courses often require the learner to study difficult texts from which considerable amounts of unknown grammar patterns and vocabulary items are to be learned and memorized. This is especially true when high-stakes assessments of course material follows. Many academic texts contain linguistically and conceptually demanding content, which strain cognitive processes, ultimately activating learning and memorizing processes (Yamashita, 2015). This is why chapters of language textbooks often begin with lists of new vocabulary and thorough explanations of unknown grammar patterns to be studied. Similarly, instructors often provide learners with lists of vocabulary and grammar patterns that will be encountered in the texts to be read. In the case of Japanese, learners are also often provided with new characters to be examined and memorized. Specifically, the challenging nature of these academic texts indicate that the cognitive demands of IR are higher than those of

ER. This is not to say that one does not learn while reading extensively, but rather that different and distinct reading processes occur depending on whether one is engaged in ER or IR (Yamashita, 2015).

2.4 The Interplay of Easy Reading Materials and Reading Rate

Considering this discussion of Rauding Theory and how ER and IR fit within its framework, one can reasonably conclude that a relationship exists between the difficulty level of a text and the speed at which one can read. Furthermore, we see that a text's level of difficulty has a substantial effect on learners' reading processes (Carver, 2000; Yamashita, 2015). This level of difficulty is based on a combination of learner reading proficiency and the linguistic and conceptual complexity of the text. This is because difficulty is relative, based on individual readers, which indicates that, through use of reading materials that are at the learner's level, anyone can engage in ER. In order to maintain the seventh principle of ER, "reading speed is usually faster rather than slower," learners must choose a text where general comprehension is possible (Day & Bamford, 2002). Researchers suggest that easy reading materials that L2 learners can read rapidly are those with which the reader is familiar with 95-99% of the text's lexical items (Beglar et al., 2012; Hsueh-chao & Nation, 2000; Laufer, 1989, 1992; Laufer & Ravenhorst-Kalovski, 2010; Schmitt, Jiang, & Grabe, 2011; Wesche & Paribakht, 2009). This range of required lexical coverage is similar to the 99% that is required for first-language (L1) reading (Carver, 1994).

Although the degree of lexical coverage needed for comprehension is similar between L1 and L2 reading, the expected reading rate of L1 and L2 readers differs substantially. Carver (1990) reports that for educated adult native speakers of English, the average rauding rate is approximately 300 (standard) words per minute (wpm). This is considerably higher than that of

the average reading rates found in EFL learners (see Table 1). For reference, Waring (2000) suggests that, while maintaining adequate comprehension, a reading rate of 150 wpm should be met before L2 readers attempt reading materials at a higher level.

Table 1 below summarizes studies on ER that report reading rate gains and is adapted from Beglar and Hunt (2014) and Park (2017). All studies are those conducted with ESL/EFL learners or native English-speaking adults. Although not reviewed in detail in this literature review, Greenberg et al. (2006) and Tanaka and Stapleton (2007) also found significant improvements in reader fluency using testing instruments that do not report reading rates in wpm.

Table 1 Literature on Extensive Reading that Report Reading Rate Gains

Study	Participants	Amount Read	Length of Treatment	Mean Reading Rate in wpm			
				(n) Group	Pretest	Posttest	Gain
Robb & Susser (1989)	First-year Japanese university EFL students (N = 125)	ER: M = 641 pages of books designed for American teenagers	One academic year	ER: IR:	79.31 78.50	86.55† 76.75	7.24 -1.75
Lai (1993)	Hong Kong secondary school EFL students (N = 266)	ER7: M = 16.0 books ER8: M = 18.5 books ER9: M = 14.2 books	Four-week summer reading program (50 hours)	(126) ER7: (88) ER8: (52) ER9:	165 85 106	226* 181* 121	61 96 15
Hashimoto et al. (1997)	First-year Japanese high school EFL students (N = 200; groups based on reading rate scores and pages read)	ER1: >200 pages ER2: 100-199 pages ER3: <100 pages ER4: >200 pages ER5: 100-199 pages ER6: <100 pages	8 months	(22) ER1: (27) ER2: (28) ER3: (17) ER4: (42) ER5: (57) ER6:	117.95 120.06 110.61 66.82 59.56 54.98	155.70 149.50 139.04 107.79 96.74 79.46	37.75 29.44 28.43 40.97 37.18 24.48
				†Gain differences of ER1-2, 4-6, & 5-6			
Lao & Krashen (2000)	First-year Hong Kong university EFL students (N = 122)	ER: Six books; approximately 388,000 words (329,800 standard words) IR: unspecified	One 14-week semester	(91) ER: (39) IR:	235 189	327* 197	92† 8
Yokomori (2000)	Japanese high school EFL students (N = 13)	Both ER & IR: 250 minutes (min.) (25 min./week)	6 months	(7) ER: (6) IR:	40.9 36.2	88.4† 54.9	47.5 18.7
Bell (2001)	Elementary-level young adult Yemenite EFL learners (N = 26)	36 hours for both groups	Two academic semesters	(14) ER: (12) IR:	68.10 78.45	127.53*† 92.54*	59.43 14.09
Sheu (2003)	Second-year Taiwanese junior high school EFL students (N = 98)	ER1 read nine graded readers ER2 read nine unmodified books ER1: 115.6 total pages; 248.5 total min. ER2: 208.7 pages; 166.3 min. IR: unspecified	Two academic semesters	(31) ER1: (34) ER2: (33) IR:	59.70 98.60 85.20	95.80* 136.0* 118.60*	36.10 37.40 33.40

Table 1 continued

<u>Study</u>	<u>Participants</u>	<u>Amount Read</u>	<u>Length of Treatment</u>	<u>Mean Reading Rate in wpm</u>			
				<u>(n) Group</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Gain</u>
Taguchi, Takayasu-Maass, & Gorsuch (2004)	First-year Japanese university EFL students (N = 20)	ER: \approx 3-6 books; 205 pages; 733-901 min. RR: two graded readers; 57 pages (16,963 words)	17 weeks	(10) ER: (10) RR:	80.88 84.84	64.48 82.28*	-16.40 -2.56
Nishino (2007)	Fumi and Mako, Japanese junior high school EFL students (N = 2)	Fumi: 36 books (402,000 standard words) Mako: 42 books (333,000 standard words)	2.5 years	ER Fumi: ER Mako:	72 58	137 111	65 53
Iwahori (2008)	Japanese high school EFL students (N = 33)	28 graded readers	Seven weeks	(33) ER:	84.18	112.82*	28.64
Al-Homoud & Schmitt (2009)	Male Saudi Arabian university EFL students (N = 65)	ER: \approx 31,500-162,000 words (10 books) IR: \approx 25,000-30,000 words (100 pages)	10 weeks	(43) ER: (22) IR:	60.08 61.62	93.57* 87.75*	33.49† 26.13
Cha (2009)	Korean technical high school EFL students (N = 20)	Unspecified (80 books available to ER group)	12 weeks	(10) ER: (10) NR:	97.80 77.00	178.40*† 99.60	80.60 22.60
Fujita & Noro (2009)	Japanese high school EFL students (N = 51)	M = 2517 words, 100 min. (400 graded readers available)	Ten 10-minute ER sessions	(51) ER:	75.05	85.05*	10
Matsui & Noro (2010)	Third-year Japanese junior high school EFL students (N = 122)	ER: M = 18,907 words, 190-200 min. (345 graded readers available)	One academic year, 19-20 ER sessions	(60) ER: (62) NR:	88.57 89.29	108.32*† 94.79	19.75 5.50
Imamura (2012)	Japanese high school EFL students (N = 38)	The group that read more (ER1): M = 45,447 words (38,630 standard words) The group that read less (ER2): M = 14,279 words (12,137 standard words)	Seven months	(19) ER1: (19) ER2:	77.60 86.74	100.55† 96.90	22.95 10.16

Table 1 continued

Study	Participants	Amount Read	Length of Treatment	Mean Reading Rate in wpm			
				(n) Group	Pretest	Posttest	Gain
Beglar, Hunt, & Kite (2012)	First-year Japanese university EFL students (N = 97)	PR1: M = 136,029.07 standard words (9.13 books; 439.43 pages) PR2: M = 158,993.56 standard words (14.82 books; 840.36 pages) PR3: M = 200,170.00 standard words (24.34 books; 1,095.23 pages) IR: Unspecified	One academic year (28 weeks)	(23) PR1:	89.71	97.73*	8.02
				(22) PR2:	94.50	107.34*	12.84
				(35) PR3:	103.09	119.93*	16.84
				(17) IR:	87.54	90.51	2.97
				†Gain differences of combined PR-IR & combined PR2/3-PR1			
Kao (2013)	Chinese adult EFL learners (N = 15)	One unmodified novel, 463 pages	10 weeks	(15) ER:	189.6	233.6*	44
Beglar & Hunt (2014)	First-year Japanese university EFL students: (N = 76; groups based on reading rate gains)	PR1: M = 208,607 standard words (23.33 books; 1,116.67 pages) PR2: M = 176,490 standard words (18.73 books; 943.73 pages) PR3: M = 184,485 standard words (18.19 books; 905.75 pages) PR4: M = 162,138 standard words (14.88 books; 749.00 pages) PR5: M = 162,549 standard words (15.33 books; 734.20 pages)	One academic year (28 weeks)	(14) PR1:	97.27	130.26	32.99
				(15) PR2:	96.90	115.61	18.71
				(16) PR3:	93.31	104.56	11.24
				(16) PR4:	90.26	94.76	4.51
				(15) PR5:	107.90	103.99	-3.91
Lake (2014)	First-year female Japanese university EFL students (N = 120)	M = 16.9 books (> 1 book/week)	One academic semester	(71) ER:	125.45	158.91*	33.46

Table 1 continued

Study	Participants	Amount Read	Length of Treatment	Mean Reading Rate in wpm			
				(n) Group	Pretest	Posttest	Gain
Huffman (2014)	First-year female Japanese (nursing) university EFL students (N = 66)	ER: M = 80,201.74 standard words (10.97 books, 545.85 pages) 215.4 min./week IR: M = 9,682 standard words (32.6 pages), 146.4 min./week	One 15-week semester	(34) ER: (32) IR:	110.59 103.76	131.33† 103.14	20.74 -0.62
Hunt (2014, 2015)	First-year Japanese university EFL students (N = 54)	M = 19.61 books; ≈ 1176.60 pages; ≈ 165 min./week (33 min./day)	One 12-week semester	(54) ER:	96.61	147.63	51.02
Chang & Millet (2015)	Taiwanese secondary EFL students (N = 64)	Both ER & AR: 115,412 words (20 graded readers)	26 weeks	(33) ER: (31) AR:	101 102	119* 145*†	18 43
				<i>Delayed post-test statistically same as post-test</i>			
Suk (2017)	Korean university EFL students (N = 171)	ER: M = 152,714 words (10.05 books); ≈ 150-180 min./week (36 min./day) IR: words unspecified; ≈ 150-180 min./week (36 min./day)	One 15-week semester	(83) ER: (88) IR:	133.29 147.76	168.42*† 163.29	35.13 15.53
Park (2017)	Female Korean private high school EFL students (N = 72)	ER: 12 graded readers IR: 48 passages in-class (M ≈ 33,600-38,400 words) & unspecified number of out-of-class readings	One 12-week semester	(36) ER: (36) IR:	113.57 117.10	139.39† 127.43	25.82 10.33
McLean & Rouault (2017)	First-year Japanese university EFL students (N = 50)	ER: M = 107,964.04 words IR: M = 16,464 words Both groups: 60 min./week	Two 15-week semesters	(23) ER: (27) IR:	99.38 97.79	130.34*† 103.05*	30.96 5.15

Table 1 continued

<u>Study</u>	<u>Participants</u>	<u>Amount Read</u>	<u>Length of Treatment</u>	<u>Mean Reading Rate in wpm</u>			
				<u>(n) Group</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Gain</u>
Greenberg et al. (2006)	English native adult learners with low literacy rates (N = 27)	Unspecified; long-term goal: 80 min./day	13-week course (71 hours)	<u>(WJ fluency test scores)</u>			
				(27) ER:	40.33	42.60*	2.27
Tanaka & Stapleton (2007)	Japanese high school EFL students (N = 190)	ER: 6,505 words (38 passages) IR: unspecified	2 terms (6 months)	<u>(Number of responses on test)</u>			
				(96) ER:	28.84	36.00†	7.16
				(94) IR:	29.96	32.41	2.45

Groups: AR = audio assisted extensive reading, ER = extensive, IR = intensive, NR = no reading, PR = pleasure, RR = repeated
 *Statistically significant improvement reported in original study,
 †Statistically significant difference between groups reported in original study,
 WJ = Woodcock Johnson Psycho-Educational Battery-3rd Revision (Woodcock & Johnson, 1990)

2.5 Benefits of Reading in a Second Language

Research on reading in a second language has had a large focus on the incidental learning of vocabulary (Krashen, 1989). However, studies have also shown that ER facilitates not only vocabulary acquisition, but also grammar, writing, and spelling, as well as oral and aural language abilities (Greaney, 1970; Krashen, 1989, 2004). In their studies, Collins (1980) and Hafiz and Tudor (1990) found that students who read extensively were more successful spellers than those who did not engage in similar sustained silent reading programs. Elley and Mangubhai (1983) similarly found that elementary ESL students who participate in ER programs far surpass their non-ER program peers in reading comprehension, writing, and grammar use. In a follow up study, Elley (1991) also found that students gain greater ability in grammar, listening comprehension, reading comprehension, oral abilities, and writing by engaging in these types of reading programs.

While these studies show considerable benefits to learners who read at length, few studies have considered the role of ER in second language reading rate gains. Furthermore, as those that have examined reading rate gains from pleasure³ or extensive reading have focused solely on English language learners, further research is needed to show the effect of ER on learner reading fluency among other language learners (Beglar et al., 2012).

³ Pleasure reading as defined by Beglar et al. (2012, p. 697-698) is reading that attempts to follow ER principles, but allows learners to read any material regardless of difficulty level. ER, however, requires learners to read materials that are relatively easy for their levels.

2.6 Extensive Reading Research in the Second-Language Context

Authorities on second-language reading argue that ER is an effective way learners can increase the rate at which they read (Day & Bamford, 1998; Grabe, 1991; Nation, 2001). Since its inception, research on ER has had a large focus on its effects on English vocabulary acquisition (Cho & Krashen, 1994; Day, Omura, & Hiramatsu, 1991; Hafiz & Tudor, 1990; Mason & Krashen, 1997; Nagy, Herman, & Anderson, 1985; Pitts, White, & Krashen, 1989; Saragi, Nation, & Meister, 1978; Tudor & Hafiz, 1989; Waring & Takaki, 2003). This leaves a gap of unstudied effects of ER in a minority language, such as Japanese, and its effect on learner reading rates.

2.6.1 Effects of extensive reading on reading comprehension. Numerous studies have investigated the effects of reading on comprehension (Beglar et al., 2012; Bell, 2001; Elley, 1991; Elley & Mangubhai, 1983; Yamashita, 2008). Many studies that explore the effects of reading on comprehension also investigate reading's effect on reading rate. As reading rate will be reviewed in more detail below, this section will focus on those studies that do not consider reading rate gains as a result of ER nor those that took place in the JFL settings. Moreover, as this section focuses on effects of ER, studies that consider other reading activities such as "book floods" will not be addressed here.

One reading comprehension study conducted over the course of a 15-week semester, compared improvements of general reading comprehension ability and lower-level linguistic ability in 31 Japanese university EFL students engaged in ER (Yamashita, 2008). In Yamashita's study, participants were required to write book reports on what they read during 45 minutes of class as well as on what they read individually outside of class. A pre-post-test comparison

revealed that participants' reading comprehension improved significantly over the course of the ER program.

Hayashi (1999) also investigated gains in comprehension through ER. Hayashi's study included 100 Japanese university EFL sophomore students enrolled in a 45-minute English course that met twice a week over eight months. Throughout the course, participants read passages in an assigned textbook as well as books of their choosing outside of class. Participants reported reading 64-68 pages on average in English per month outside of class. Hayashi also found that participants improved 8.5% on the text reading comprehension section of a TOEFL institutional test. However, although an improvement was reported, a pre-post comparison using inferential statistics was not given. Furthermore, it is unclear if the result was due to the out-of-class reading, the textbook passage reading, a combination of the two, or something else. Hayashi does not indicate in any detail what other EFL courses participants may also have been enrolled. This is significant since this may have affected the results. To offset these types of limitations, the current study takes account of participants' coursework or personal Japanese studies besides their participation/ER.

Hafiz and Tudor (1989) conducted an experimental study exploring the effects of so-called ER activities on reading comprehension. Their study included 46 10-11-year-old participants of Pakistani descent enrolled in ESL classes in the U.K. Over a three-month period, 16 participants engaged in ER five hours per week, while the remaining 30 participants had no other treatment. During their ER sessions, participants were given access to dictionaries and would ask the researcher what the meanings of certain words were. They were also allowed to read books at home outside of the group ER sessions. All participants also completed National Foundation for Educational Research tests of Proficiency in English as pre- and post-tests. Hafiz

and Tudor found that the experimental ER group outperformed the control groups on reading comprehension on two of the three reading sections of the post-test. The experimental group's reading comprehension gain was also the only one to reach statistical significance. However, ER was not conducted following strict adherence to ER rules and principles, in that the researchers gave participants access to and allowed the use of dictionaries, and when asked would often give participants the meanings of unknown words. Furthermore, the participants were in an input-rich environment, making it difficult to determine whether ER was the main reason for their significant improvement. The current study avoids these limitations by including participants in an environment with little or no outside Japanese input as well as by strictly following ER principles; i.e., no dictionary use, no relay of meaning of unknown words from the researcher, etc.

2.6.2 Effects of extensive reading on motivation. Many studies have examined the role of ER on learner motivation (Mason & Krashen, 1997; Robb & Susser, 1989; Taguchi, Takayasu-Maass, & Gorsuch, 2004), and overwhelmingly show the positive perceptions learners have of ER (e.g., Cho & Krashen, 1994; Elley, 1991; Hayashi, 1999; Hitosugi & Day, 2004; Mason & Krashen, 1997). Motivation is one of the most researched benefits of ER (Waring, 2001). Some of the positive effects of ER described in these studies include increased desire to read, enjoyment from reading, and higher levels of confidence in one's ability to read. Some studies that explore the effects of ER on motivation also investigate the effect ER has on reading rate. Those studies that are conducted in JFL settings or that explore both motivation and reading rate will be reviewed in their respective sections below.

One study that does focus on motivation is S. Mori (2004). In S. Mori's study, 100 Japanese university EFL students engaging in an 11-week ER program responded to a

questionnaire regarding multiple motivational factors involved with ER. Results of the survey showed that study habits and negative intrinsic value of stories were associated with the amount learners read. Specifically, S. Mori states that “the less students think stories are boring or childish . . . the more they read” (p. 75).

A later case study conducted over 2.5 years investigated the effect of ER on multiple variables (reading strategies, motivation, reading rate) by examining the outcomes of an ER program on two fourteen-year-old Japanese secondary school EFL students: Fumi and Mako (Nishino, 2007). Both students attended separate private high schools (which had a greater emphasis on English learning than public high schools) and both high schools implemented IR throughout reading courses. During separate tutoring sessions with the researcher, the two participants engaged in ER for 15 minutes each week. Through field notes and interviews, Nishino identified seven factors that seemed to influence fluctuations in the two participants’ L2 reading motivation. Specifically, those factors are 1) realization of achievement; 2) pleasure and flow of reading; 3) confidence in L2 reading; 4) a tendency towards more independent reading; 5) less interest in graded readers; 6) a preference for authentic texts; and 7) university entrance exams. Nishino suggests that of these factors, factors 1-3 enhance intrinsic motivation. Furthermore, Nishino argues that sociocultural elements may have a larger role in L2 reader motivation in ER programs than previously thought.

2.7 Extensive Reading Programs in the JFL Classroom

Several ER courses have been conducted in the EFL setting (most of which are conducted in universities in Japan). However, recently ER courses have gained interest in other settings in other countries. For example, in 2013, Yuka Kumagai, Master Lecturer at the University of

Southern California, created and began implementing ER courses for her JFL students (Kumagai, 2013, 2014). In her courses for elementary and intermediate-level students, learners “are guided to read as many pages as possible without using dictionaries while the instructor carefully monitors their reading behavior and gives advice and suggestions” (Kumagai, 2016, p. 1). In these courses, she combines a typical ER program with group discussions, shadowing, and writing and presenting book reports. However, Kumagai does not explain how these activities are combined with an ER program in her syllabi. In completing reading homework, students are required to use a Google form to keep a reading log containing information about the title and level of the text they read, the pages they read, as well as comments on the text. Although students are instructed to read as many pages as possible, other than filling out a reading log no amount of time or number of pages is explicitly required of students. This reading homework is worth 20% of the students’ course grade. Previously, Kumagai also discussed more about her courses and has reported that through the course activities her students feel their reading speed, vocabulary and *kanji* (Chinese character) recognition, as well as other skills, have improved (Kumagai, 2014). Her students have also voiced their desire to continue ER on their own following the course. In addition, there are many pedagogical papers and conference presentations that report the relative success of extensive reading in the JFL classroom (Peterson, 2019; Reynolds, 2004; Yoshimura, 2019). However, nearly no experimental or quantitative studies that empirically investigate the effects of ER on learner reading abilities (e.g., reading rate) are available as of now, likely due to difficulty in implementing sound research design.

2.8 Extensive Reading Research in the JFL Setting

Early studies of ER in the JFL setting examined ER from a theoretical perspective. Specifically, Fukada, Kobayashi, and Deguchi (1991) discuss ER for JFL learners across multiple points, including theory, reading materials, and instruction. In their paper, Fukada et al. argue the extreme importance of starting extensive reading instruction in novice level instruction rather than waiting until learners are in intermediate or advanced-level classes. They further argue that this instruction should trend away from specific vocabulary or grammar review, and rather focus instead on reading for meaning using reading materials learners are interested in and that are at their level. This is based on the idea that if learners are stuck doing IR while they are at the beginning of their Japanese studies, they may never overcome the habit of reading intensively, and fail to gain the benefits of reading for pleasure. Some problems with implementing ER in the JFL setting that Fukada et al. discuss include the continuing idea that increasing vocabulary and grammar knowledge is sufficient to develop learner reading skills, the late implementation of reading activities (in intermediate or advanced-level classes), and finally that there is a large lack of reading materials that fit learner reading levels. Although this paper was written almost 30 years ago, many of these same problems exist today.

One of the earliest studies on ER in a JFL setting was conducted by Leung (2002) who investigated the effect of ER on her own self-study of Japanese over 20 weeks. Over the course of the study Leung read for approximately one hour each day. This led to a total of 32 simple Japanese books (1,260 pages) being read. Simple books in this study referred to children's books and Japanese manga (comic) books. Leung read 483 manga pages and 777 children's book pages. Due to her limited Japanese ability, reading a wide variety of texts was not possible. However, other ER principles such as reading at one's level, and skipping books that are difficult

or uninteresting were maintained. Leung found that ER both facilitated her ability to acquire new vocabulary (a 23.5% increase over one month) and enhanced her reading comprehension. She also found that ER helped her become more understanding of the complexities of Japanese, helped her feel comfortable reading, and promoted self-confidence.

Another single-subject research study by Tabata-Sandom and Macalister (2009) was conducted in a JFL setting, and focused on affective factors influenced by ER. The study examined an English L1 JFL learner who engaged in ER over three months. The participant was advised to read anything she liked for 15-20 minutes every day while keeping a record of what she read. The participant was provided with a selection of 70 children's books from which to choose. Tabata-Sandom and Macalister (2009) conducted pre- and post-interviews to ascertain what the participant's L1 and L2 reading attitudes and habits were prior to and following the treatment. During the study the participant read 106,409 characters, mostly from intermediate-level texts, over 48 days (she did not read every day). In her post-treatment interview, it was found that, to the participant, the most rewarding aspect of ER was being able to read material in which she was interested. Interestingly, the materials that the participant chose to read provided *kanji* with phonetic annotations (i.e., *furigana*). This is intriguing as it contradicts the preferences of advanced-level participants in Kirwan (2003). This preference indicates that insufficient *kanji* knowledge was a hindrance and a main demotivating factor for her prior to beginning the study. The participant also reported that following the ER program she felt the amount of mental translation she was doing seemed to decrease. This study also found that the more ER the participant did, the more she felt she was able to understand new words, which had a positive impact on the participant's L2 reading attitude.

The results of Tabata-Sandom and Macalister's (2009) study indicate a facilitative effect of ER on JFL learner reading attitudes. However, their study is limited in that it only discusses the self-assessed subjective assessment of a single-subject. This makes it difficult to generalize the study's results. Additionally, the study was limited in that the participant was only provided with a small number and type of texts. The current study was able to avoid these limitations through the use of both quantitative and qualitative data analyses, including a number of participants, and providing an abundant amount and variety of texts, including graded readers.

In another study focused on JFL learners, Hitosugi and Day (2004) conducted a 10-week ER program in a second semester JFL course of 14 students at the University of Hawaii. As it was required to maintain the second semester course structure, the ER activities introduced through the study were supplementary to students' main coursework and completed as homework. Although the course required students to read 40 texts from a selection of 266 children's books, the average number of books read by students was 31.6. To connect what participants read outside of class, 30 minutes was set aside each week for participants to discuss, in Japanese, what they were reading for their ER. To measure the impact of the program a three-part reading ability assessment and a questionnaire was used. Hitosugi and Day found that the ER program facilitated a greater overall increase in positive perceptions of Japanese learning among ER participants compared to that of a control group ($n = 10$). Specifically, ER participants reported a higher degree of enjoyment in their coursework, Japanese ability, motivation to do well in class, and desire to read more. Of particular interest to the present study is that ER participants' perceived reading rate was higher than that of the control group's perceived reading rate. Hitosugi and Day also found that ER participants' gain scores (0.88 points) on a reading comprehension test outperformed those of the control group (-0.13 points).

Despite finding a difference in comprehension scores, Hitosugi and Day (2004) did not conduct statistical analyses on these results. In addition, their study is further limited by the absence of controls for the three-part reading ability assessment, and the lack of an objective reading rate assessment. Studies assessing reading rate objectively will further strengthen any implications that could be made from Hitosugi and Day's study.

Although studies conducted with participants studying languages other than English are less common, a recent qualitative case study explored changes in ER motivation among nine high school JFL students over five to seven months (de Burgh-Hirabe & Feryok, 2013). During the study, participants were encouraged to read extensively in Japanese outside of class, however reading was completely voluntary. Specifically, participants were instructed to read books from a selection of 80 lower-level graded readers, and to read as much as possible with a goal of at least one book per week. Participants kept a record of what they read and participated in 30- to 60-minute interviews with the researchers. Over the course of the ER program, the amount of time students chose to read varied greatly with most decreasing as time went on, and five of the nine abandoning the program after the fifth month. Results of the study indicate that for four of the participants, motivation to engage in ER increased, while for three it decreased, and for two it remained stable. Furthermore, ten major factors influencing learner motivation were found. Specifically, those were: 1) a goal to improve Japanese; 2) instrumental benefits; 3) perceived progress and feeling of success; 4) intrinsic value; 5) ER books; 6) beliefs about L2 learning; 7) autonomy (e.g., being free to choose books, when and where to read); 8) external demands (e.g., assessments, exams, homework); 9) distractions (e.g., sports, friends); and 10) self-regulation. Notably, Nishino's (2007) Factors 1 and 7 are the same as de Burgh-Hirabe and Feryok's Factors 1 and 8, respectively.

De Burgh-Hirabe and Feryok (2013) conclude that more effective ER programs are likely to 1) have a wide range of materials available for participants to read, and 2) make ER mandatory. Without these two criteria, learners may become bored or distracted and discontinue reading altogether. The current study was able to implement these suggestions. Furthermore, de Burgh-Hirabe and Feryok's findings indicate that learners differ in their approach to ER and that different factors may affect the degree of reading completed by individual learners. As learners in their study were not strictly monitored while engaged in ER, it is unclear as to whether participants conducted ER as they were initially instructed or if they deviated from those rules. This is a difficult hurdle to overcome when ER is assigned as homework. These results further suggest the need for constant communication and confirmation of learners' actual approach in conducting ER. The researcher in the current study was able to control participants' method of ER through constant and close monitoring of all ER sessions completed.

Some of the most recent articles examining ER in the JFL setting have been authored by Tabata-Sandom (2013, 2016, 2017). In particular, Tabata-Sandom's 2013 paper investigated how graded readers may be used as meaningful input for JFL learners. Mainly, the study investigates the intent of writers of graded readers and learner's perceptions of those texts. The study was conducted using six writers of Japanese graded readers, and 14 JFL learners. The researcher used a focus group and questionnaire to find the intent of writers, and used a think-aloud task, text comparison, and an interview. Tabata-Sandom found that the authors all held a communicative intent in writing graded readers. However, these authors were instructors first and authors second. This influenced their writing process (since their writing held a strong pedagogical motive) and may have interfered with creating graded readers that were interesting to JFL learners. Regarding learner reading of graded readers, the author found that graded readers

allowed learners to read more fluently than with the unsimplified (original) texts. She also found that learners use more top-down processes with graded readers, while the original texts slowed readers and hampered their reading abilities. She also found that the graded readers led to more engaged learners. However, more advanced learners seemed to have negative perceptions of the graded readers. This suggests a greater need for explicit explanations of the efficacy of graded readers. This study further indicates the positive benefits of graded readers.

Tabata-Sandom (2016) further investigated the value of graded readers for ER, exploring what types of texts and reading aids are suitable for Japanese graded readers. The study examined four types of modified graded readers including simplified texts, elaborated texts, texts with marginal glosses, and texts with on-screen pop-ups. To test how learners are affected by the different modifications, 31 participants completed an oral free-recall task and a short answer reading comprehension test following reading of the different text types. Tabata-Sandom found that learners performed significantly better on the reading tasks following reading of modified texts than authentic texts. She also found that participants performed best on the simplified reading text. Tabata-Sandom thus suggests that simplified texts are likely to be most suitable for use as graded readers. She further suggests that adjusting *furigana* based on graded reader level may motivate kanji learning more than unselective provision of *furigana*.

In 2017, Tabata-Sandom examined 34 upper-intermediate-level JFL learners' responses to pleasure reading, speed reading, and IR. During the study, participants were all enrolled in IR courses that were supplemented by pleasure reading. Twenty-two participants also received speed reading training for 10 minutes over 10 sessions. Participants were also required to keep a log of their pleasure reading with all participants reading two books every week. Results of a perceptions survey indicate that participants responded more favorably to pleasure reading and

speed reading than to IR, and most favorably to pleasure reading overall. Furthermore, no statistically significant reading rate gain was detected in the 22 speed reading participants. However, a comparison of the final reading rate test and the initial reading rate test indicate that reading speeds seemed to improve in general. Overall, while the results of the questionnaire are positive; this study is limited in that all participants did both the intensive and pleasure reading in tandem. Furthermore, no comparison is made between the reading speed of those that had the speed-reading training and those that did not. Moreover, the results of the speed-reading training are seemingly confounded by the mix of treatments. Additionally, the non-significant result may have resulted from the fact that participants were all Japanese majors who were in their final year at the university. This may have led to a ceiling effect. Considering these limitations, further studies are needed to more explicitly investigate the effects of ER on reading rate gains among JFL learners.

2.9 The Benefits of Higher Reading Rates

Experts on first and second-language reading agree that higher reading rates lead to better overall reading performance (Alderson, 2000; Carver, 2000; Day & Bamford, 1998; Grabe & Stoller, 2002; Nation, 2001; Wolf & Katzir-Cohen, 2001). In particular, recent eye-tracking research has shown “the importance of rapid and automatic processing” of written text among readers (Alderson, 2000, p. 18). Alderson (2000) reports that, at least for English, the distinguishing characteristic between fluent readers and poor readers is reading speed, or, more specifically, the ability to recognize and process the content of a text accurately and automatically. Studies also suggest that rapid reading reduces one’s cognitive load, allowing one to make higher-level predictions from a text (Alderson, 2000). Such benefits may also precipitate

a higher rate of lexical inferencing among L2 learners, subsequently leading to increased incidental learning. Alderson also notes that less proficient readers fail to increase their reading rate due to a focus on individual letters and words, leaving them “word-bound” (p. 19).

2.10 Empirical Evidence of Extensive Reading’s role in Reading Rate Gains

Compared with other areas of interest within ER research, studies investigating the effect of ER on reading rate are less common. An examination of research search engines, recent articles, and a recent meta-analysis (Nakanishi, 2015) indicate that only 28 published articles report changes in reading rate over the course of an ER program. Of those 28 articles, 27 report effects on EFL learners and one on native English adult learners with low literacy rates. Although all 28 articles are summarized in Table 1, the following will provide a detailed review of the most recent studies published over the last 10 years.

In 2009, a set of three studies published by Al-Homoud and Schmitt (2009), Cha (2009), and Fujita and Noro (2009) examined the effects of ER on reading rates in three settings: Saudi Arabia, Korea, and Japan respectively. Each of these studies implemented an ER program with graded readers. Al-Homoud and Schmitt compared a set of ER and IR groups, Cha compared an ER group with a control group that received no treatment, and Fujita and Noro had no comparison group. Each of these studies saw statistically significant improvements in ER group reading rates. Specifically, ER participants in Al-Homoud and Schmitt’s study saw a significant increase in comprehension scores and vocabulary sizes. The researchers also reported significant differences between ER and IR group attitudes toward reading, with the ER group having significantly more positive attitudes toward reading. The results of Al-Homoud and Schmitt are

even more astonishing when taking into account the fact that, for this study, the ER participants were considered to be linguistically weaker than their IR comparison peers at the outset.

Cha (2009) also reported on comprehension and vocabulary improvement. Specifically, Cha found that both the ER and control groups' comprehension and vocabulary sizes improved significantly over time. Fujita and Noro (2009) found similar results with regards to improvements in reading comprehension. However, all three of these 2009 studies had participants who were also enrolled in English classes and were completing other English coursework which may have affected the results. This limitation is also discussed in Fujita and Noro (2009). These studies, like the majority of previous work, also are limited from participants self-reporting their ER.

In 2010, Tadashi Noro followed up his 2009 study with a similar study (Matsui & Noro, 2010), this time including a control group of participants that did not engage in ER. The ER group was given access to 345 books of differing levels including picture books and graded readers to read during the first 10 minutes of one English class per week. The control group conducted speaking practice during this time. To track learner reading rates, participants completed pre- and post-tests by reading passages provided by the researchers and recording their own reading rate. Matsui and Noro found that although both groups improved significantly, the ER group's post-test reading rates were significantly faster than the control group's reading rates. They also found comprehension scores for both groups improved significantly. However, because participants recorded their own times and were fully engaged in other English learning activities, these results are suggestive at best. Furthermore, as there was no mention of a Bonferroni correction for the multiple hypothesis tests conducted, one may question the statistically significant difference in reading rates found on the post-test.

Also investigating the reading rate gains, Imamura (2012) had 38 participants keep track of their out-of-class ER, which was completed using graded readers. Participants' reading span, rate, and comprehension were then tested. Although participants completed pre- and post-tests to analyze reading rate gains using reading comprehension questions, it is unclear how participants' reading rates were actually timed. Imamura then analyzed the differences between students who reported reading an average of 45,000 words and those who read an average of 14,000 words. Imamura reported a significant interaction between these two groups indicating that the more participants read the faster their reading speeds ended up being. The limitations to this study follow those of others, including participants concurrently enrolled in English courses, unclear methods for recording student reading rates, and self-reporting.

Kao (2013) also reported reading rate gains as a result of ER. Participants in Kao's study were enrolled in a novel reading course where the instructor read portions of a single 463-page novel during their weekly three-hour class sessions. Participants were asked to read what was not read to them in class at home on their own, however no accounting for participants' at-home reading was conducted. To track participants' reading rates and comprehension, Kao had participants time themselves reading passages commonly used for building reading speed. This was completed once before the novel reading course began and once after it had finished. Although Kao found significant increases in participants' reading rates and comprehension, as participants timed themselves, were not accountable for their at-home reading, were read to during class instead of reading individually, and would often ask the instructor to teach them the meaning of words as he read the text to them, one may question whether participants were truly engaged in ER and whether participants' reading rates were accurate. To avoid these types of limitations, the researcher of the current study timed participants' reading speeds, conducted

reading comprehension interviews, and monitored all of the participants' silent reading of a variety of materials.

An often cited study among those that report reading rate gains is Beglar et al. (2012). Over one academic year, Beglar et al. investigated the effects of pleasure reading and IR on 97 first-year Japanese university EFL students' reading rates. They also sought to answer whether reading rate gains result in weaker comprehension levels and what possible relationship exists between type of text read, simplified and unsimplified, and reading rate gains. (Simplified here refer to texts created with learners in mind, controlling for different linguistic features. While unsimplified refers to texts created for native speakers.) Participants in their study were assigned to one of four groups including three pleasure reading groups and one IR group. The IR group ($n = 17$) attended a freshman reading course with activities including listening to recorded fairy tales, reading aloud, and presenting translations of texts. Out-of-class homework included writing reports, translating passages, and answering reading comprehension questions. The pleasure reading groups ($n = 80$) attended a course specifically for pleasure reading and were encouraged to read graded readers more than unsimplified texts. In-class activities for pleasure reading group 1 included reading the same fairy tales as the IR group, while for pleasure reading groups 2 and 3 included reading instructor-selected graded readers, skimming the texts, making predictions, and filling out worksheets (also typical IR activities). These groups also engaged in out-of-class pleasure reading and short reading reports. Using a reading rate and comprehension test Beglar et al. assessed participants' reading rate at the beginning and end of the study. They found that although no statistically significant gain in reading rate was found in the IR group, all pleasure reading groups read significantly faster on the post-test. They also found that statistically, the pleasure reading groups' reading rate gains were significantly higher than the IR

group's post-test reading rate. They also found that comprehension levels did not decrease over the study and that simplified reading was associated with greater reading rate gains than unsimplified reading.

Beglar et al.'s (2012) study suggests that pleasure reading (and by extension ER) may lead to higher reading rates among L2 learners. However, time on task for both groups was not controlled for which may have led to one group studying more than another. This limitation is further exacerbated by the lack of any report on how much the intensive group read overall. Furthermore, in the reading rate tests, reading rates were recorded in 10-second intervals rather than precise times, which may have led to over or under estimating learner reading speed. A potential testing threat may have also been introduced since both pre- and post-tests were identical. Other threats include a lack of control over what students read outside of the study as well as how students conducted pleasure reading on their own. Further studies that shore up these limitations and include data from languages other than English are essential in further clarifying and comprehending the effects of pleasure reading and ER.

Using the pleasure reading data from Beglar et al. (2012), Beglar and Hunt (2014) inquire into the number of standard words that must be read to produce adequate reading rate gains. To address the number of standard words (i.e., number of 6 character units) required to observe reading rate gains, participant data were split into five percentile ranks based on their reading rate gain in Beglar et al. (2012). They found that the group with the greatest gain in reading rate also read the most, reading 208,607 standard words or 1,251,642-character units over 28 weeks. (In their study character units included letters, spaces, and symbols.) Based on these results they suggest that language learners who read approximately 200,000 standard words over 28 weeks (\approx 7,200 standard words per week) from level-appropriate texts are likely to achieve substantial

reading rate gains. These results, although intriguing, require further examination to determine if a goal of 7,200 standard words per week is feasible for learners of differing levels and target languages. The present study inquired into this directly by setting reading goals with participants and recording the number of characters (not character units) each participant read. In the current study, a 12,000 character per week (7,200 standard word) reading goal was set and was calculated using the Japanese word to character conversion discussed in Chapter 3 section 3.4.

Three more studies examining reading rate gains resulting from ER, also published in 2014, were Lake (2014), Huffman (2014), and Hunt (2014, 2015). In Lake (2014), so-called ER participants kept reading logs of the graded readers they read at home as part of their ER. Lake found that his students' reading rates improved significantly over the course of the study while maintaining high levels of comprehension.

Huffman (2014) was the only of the three studies to have a comparison IR group that completed a pre-post reading rate test comparison. Huffman's IR group read materials that were more difficult and assigned by their instructor. IR participants reported completing IR for approximately 2.44 hours per week, while the ER group reported reading graded readers for approximately 3.59 hours per week. Participants completed reading rate tests at the beginning and end of the study using passages from a speed-reading text. Readability of the pre- and post-tests were set to be practically identical. Huffman found that ER participants' reading rates improved significantly more than their IR counterparts. He also found that participants' comprehension levels were maintained. Finally, Huffman also found no relationship between participants who read more and higher reading rate gains. This final finding is similar to that found by Beglar et al. (2012). One limitation to Huffman's findings, however, is that the ER group read over an hour more than the IR group each week.

Participants in Hunt (2014, 2015) also participated in out-of-class ER activities, reading a variety of graded readers and keeping a log of their reading each week. Although no statistical analysis was conducted, Hunt (2015) reports that participants' reading rates increased by 51 wpm on average over the semester ER course. However, it is unclear what instrument was used to assess participants' reading rates as well as if comprehension was assessed or not.

The previous three studies, like many others, all lacked strong control over what participants actually did during their ER experience as well as other second-language input sources such as secondary English courses. For example, Huffman (2014) states that the "fact that students in [his] study engaged in timed reading activities during class time throughout the semester" may have been an "even more influential factor accounting for [reading rate gains]" than ER alone (p. 28). Furthermore, it is unclear if participants strictly followed ER principles and, as Huffman (2014) also reports "[t]here is no way to guarantee that all of the students actually read [what they reported] every week" (p. 24). These limitations indicate that studies with stricter control over what participants are engaged in throughout the study are necessary for showing the effects of ER more clearly.

In the years following Beglar et al. (2012), three additional studies have been published focusing on reading rate differences between ER groups and IR groups. While McLean and Rouault (2017) implement an ER program in first-year Japanese university EFL courses, Suk (2017) and Park (2017), were among the first to assess the effects of ER on Korean EFL learners' reading rates.

In Suk's (2017) study, participants enrolled in multiple English language courses were assigned to an IR group or ER group. The ER group read graded readers for 15 minutes as part of their normal coursework, while the IR group engaged in IR activities. Both groups also

continued their respective treatments at home for what participants reported to be equal amounts of time. Although Suk claims the participants in the ER group only conducted ER outside of class, there is no way to guarantee this. Suk developed and conducted pre- and post-tests using narrative and expository texts to assess learner reading rate and comprehension. Participants recorded their own reading completion time as part of these tests. Following these interventions, Suk reports that the ER group's reading rates and comprehension scores improved significantly, and that the ER group's post-test reading rates were significantly higher than the IR group's rates.

In a similar manner to Suk (2017), Park (2017) conducted a study with participants enrolled in courses that focused solely on ER or solely on IR. Some participants in these courses also had additional English input from other English lessons or materials. Furthermore, ER participants in Park's study also read as much as possible outside of class, while the IR participants completed IR activities such as grammar or vocabulary building exercises. ER participants kept a log throughout the study of their reading to report to the researcher. Different texts with the same level of readability were used for pre-post reading rate and comprehension tests. Park found that the ER group's reading rate and comprehension post-test scores significantly outperformed the IR group's scores. However, the results of both Suk (2017) and Park (2017) may have been affected by other variables such as out-of-class English input, other English coursework, as well as the way participants actually conducted their ER at home.

Chang and Millett (2015) also investigated reading rate gains of students engaged in ER (group 1) and in audio-assisted ER (group 2). Participants in both groups read 20 graded readers chosen by the researchers. While the ER group read the graded readers silently, the audio-assisted ER group listened to a dramatized oral rendition of the books and followed along. Two

separate passages were prepared by the researchers and used as the reading rate and comprehension pre- and post-tests. A delayed post-test was also conducted three months after the initial post-test and used the same passage as the post-test. In reading the passages for the tests, participants marked down their own reading time and then received a reading comprehension test. Chang and Millett found that while both groups improved significantly, the audio-assisted ER group's reading rates and comprehension test scores were significantly better than the ER group's scores on the post-tests. However, the audio-assisted group's comprehension levels were higher from the outset. The researchers suggest that the reason for the difference may be that the silent reading ER group seemed to lose their place often while reading, resulting in a weaker understanding of the stories. Finally, it can be stated that participants in this study did not follow all the principles of ER in that they did not choose what to read, which may have led to reading material that was not enjoyable or that was difficult. Notably, Chang and Millett admit that the generalizability of their results "rely on future studies for improvement and clarification" (p. 101).

Finally, one of the most recent studies to investigate reading rate gains in ER and IR groups is McLean and Rouault (2017). In their study, participants completed ER or IR activities for 60 minutes per week. The ER group participants read graded readers outside of class while the IR group completed grammar-translation exercises. Participants' pre- and post-study reading rates were measured using timed-reading passages followed by comprehension questions. After reading the passages in class, the participants marked their own time and moved on to completing the comprehension questions. McLean and Rouault found that while participants' pre-test rates were comparable, the ER group significantly outperformed the IR group on the post-test, maintaining a comprehension level of 70% or higher. Although McLean and Rouault

state both groups' time on task were equal, the amount of time spent engaged in ER or IR activities was calculated using self-reports by participants who were required to complete 60 minutes of homework to receive course credit. As participants' time on task was self-reported and counted toward their grade, participants' may have reported time on task that was not actually completed. Furthermore, as participants' at-home reading was not monitored, it is unclear if participants strictly followed the ER principles taught to them.

2.11 Summary of Previous Literature on Extensive Reading

The studies reviewed here have attempted to show the effects of ER on L2 reading abilities. Many have focused on ER's effect on learner motivation while others suggest facilitative effects on learner reading comprehension. A number of studies explore the reading rate gains EFL learners attain through ER. However, many of these studies fail to control for possible confounding variables. Indeed, most ER studies have failed to thoroughly enforce principles of ER as outlined by Day and Bamford (2002) as well as ER rules described by Awano et al. (2012). (For a description of these ER rules in English see NPO Tadoku Supporters (2011)). Previous studies have often failed to strictly monitor student reading, which may have led to learners conducting IR rather than truly engaging in ER. Furthermore, controls on what students read outside of the study have rarely been put into place in previous studies. Finally, although pedagogical studies have also investigated how ER programs can be implemented in JFL classrooms and its effect on learner affective factors, few experimental or quantitative studies exist that investigate the possible effects of ER on JFL learners' reading skills.

The current study has been designed to overcome the limitations and to fill gaps left by previous studies. This research aimed to accomplish this by exploring what effects ER programs

have on learner reading rates. It also assesses learners' ability to maintain adequate levels of comprehension as reading rates increase. Furthermore, it is hoped the present study will shed light on what a feasible reading goal may be for intermediate-level JFL learners. Moreover, the present study further examined learner perceptions of ER. This was accomplished by addressing the following research questions:

2.12 Research Questions

- RQ1. What is the average reading rate of intermediate-level JFL learners prior to and following engagement in ER?
- RQ2. Will ER lead to reading rate gains in intermediate-level JFL learners?
- RQ3. Are learners who engage in ER able to maintain a high-level of comprehension as their reading rates increase?
- RQ4. Is reading 12,000 characters (7,200 standard words) each week a feasible goal for intermediate-level JFL learners engaged in ER?
- RQ5. What are intermediate-level JFL learners' attitudes towards ER?

CHAPTER 3. METHODOLOGY

3.1 Overview

This chapter discusses the methodology used to collect and analyze data that will be used to answer the research questions posed in Chapter 2 section 2.12. Specifically, this chapter introduces the single-case design used as the main research methodology. A detailed presentation of participant information is then presented followed by the research procedures. The chapter ends with a discussion of the materials and instruments used to collect data in the study.

3.2 Single-case Design as Method of Research

The current study was conducted using a single-case design (SCD) research method. Under single subject designs, “data are collected and analyzed for only one subject at a time” and are often used when group designs are not feasible or are inappropriate in answering a researcher’s questions (Fraenkel, Wallen, & Hyun, 2011, p. 302). This is particularly true when observation is part of the method of data collection, as is the case for the current study. Fraenkel et al. explain that SCDs are frequently used when “intensive data collection on a very few individuals makes more sense” than on large groups (p. 302).

Using an SCD, participant progress is gauged by comparing within subject baselines (Kennedy, 2005; Neuman & McCormick, 1995). Although, as far as the current researcher is aware, this experimental design has not been utilized in other extensive reading (ER) studies, it has been used in numerous studies on reading and reading rate (Allen, 2016; Kuhn & Stahl, 2003). Furthermore, based on discussions with experts in SLA, L2 reading, and research methodologies, the SCD was esteemed to be appropriate for the current study for several reasons.

Given the principles and rules of ER and the current study's research questions, a typical pre-post group comparison design is difficult to carry out. In group comparison designs, it is difficult to thoroughly enforce the rules and principles of ER. Implementing ER as an out-of-class activity makes strict monitoring of student reading in group comparisons less feasible. In such cases, learners' approach to reading may differ, with some actually engaging in intensive reading (IR) rather than ER. Furthermore, it is difficult to control what learners read and the amount they read outside ER studies, one more reason why group designs are difficult to conduct.

On the other hand, the SCD used in the current study as well as the constant physical presence of the researcher during treatment allowed the researcher to strictly monitor participants' ER in order to control for possible variance in approach to the treatment (i.e., ER) and adherence to ER guiding principles and rules. As previous studies on the effects of ER often fail to control for possible differences in how learners actually conduct ER, the current study's approach using the SCD is of particular importance. Moreover, for all participants in the current study not enrolled in a Japanese course (except for Liam), this design further allowed the researcher to account for all Japanese language learning activities in which the participant engaged.

In Neuman and McCormick's (1995) book on single-subject experimental research, they suggest that SCDs complement other research methods. Specifically, SCDs may assist in elaborating on case studies or in determining research questions to be answered using group designs. As this research will be part of a larger study on ER involving a large number of JFL/JSL learners, the current study is an essential work within a more comprehensive research agenda.

Studies that include only a single-subject are weak when it comes to external validity. Fraenkel et al. (2011) state that “studies involving single-subject designs that show a particular treatment to be effective in changing behaviors must rely on replications—across individuals rather than groups—if such results are to be found worthy of generalization.” Horner et al. (2005) state that “features of external validity of a single study are improved if the study includes multiple participants” (p. 171). Horner et al. continue, suggesting studies that include at least three participants are able to demonstrate an effect. Thus, to bolster generalizability to a larger population of intermediate-level JFL learners, the current study took advantage of multiple participants in an SCD, each participant acting as a replication (inter-subject replication) of the study. As a result, one participant is presented as the focal point of data analysis while the other participants’ replication data act as supporting evidence of the outcome. The current study thus employs within- and between-subject comparisons to control for major threats to internal validity and to enhance external validity (Horner et al., 2005).

3.2.1 Data collection and analysis. Using the SCD, the present study collected extensive reading rate data on a small number of participants. This data was then analyzed by graphing each participant’s reading rate on a line graph, the primary method used by SCD researchers in presenting and illustrating effects of a treatment: in the case of the current study, the effect of ER on reading rate (Fraenkel et al., 2011). Although individual learner data will not be aggregated for the main analysis, each case will be grouped for comparison.

3.2.1.1 SCD implementation. Data collected in the current study are used to show the possible effects of ER on intermediate-level JFL learners’ reading rate gains. This is done by addressing the following two questions: (1) Did participants’ reading rate improve over time?

and (2) Can reading rate gains be attributed to ER engagement? This section explains how the current study implemented single-case intervention research design standards in graphing and analyzing reading rate data.

Figure 1 shows the outcome of a hypothetical single-case extended reversal (A-B-A-B-A) design following the SCD method used in the current study. The vertical axis represents reading rate in characters per minute (cpm, henceforth). The horizontal axis represents individual reading tests. The four black vertical bars indicate a change in the condition from A to B or vice versa.

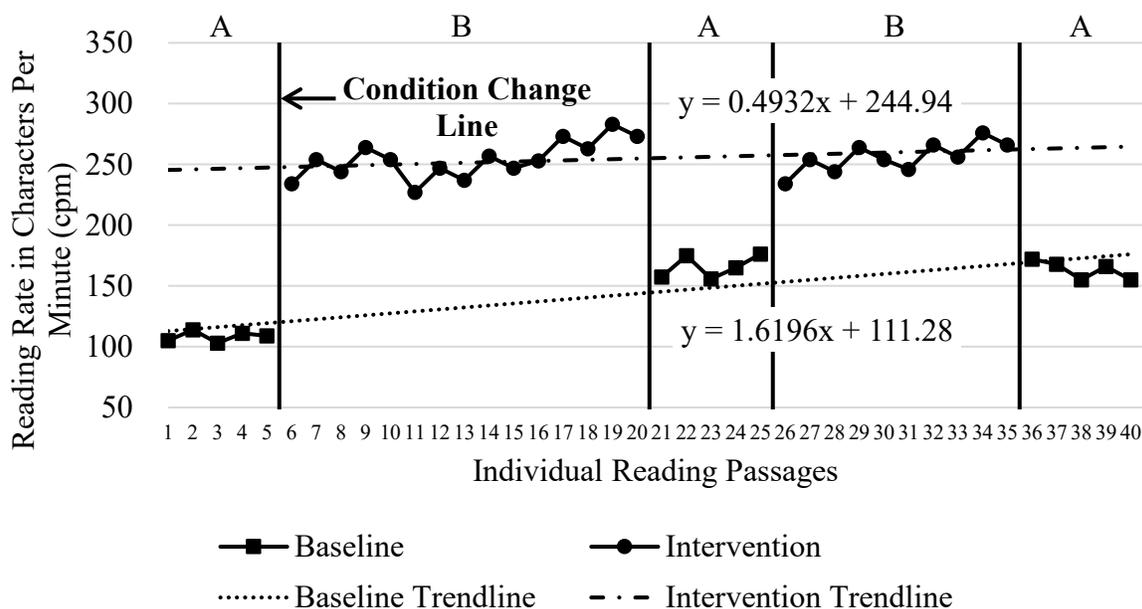


Figure 1 Graph of Hypothetical Reading Rate Data with Positive Trendlines

During each phase (condition) of the hypothetical single-case study (shown above) at least five reading tests are conducted and reading rates are plotted using a line graph. Each data point on the graph represents the learner's reading rate for the given test conducted with the researcher. Based on the hypothetical data shown in Figure 1, this participant reads slower during initial baseline conditions than final baseline conditions. As the ER treatment in the current study would require more than a single ER session for a demonstration of an effect to be observed the

determination of a causal relationship will focus more on possible long-term gains (e.g., changes from initial baselines to subsequent baselines) rather than possible immediate demonstrations of an effect from phase A to phase B. For example, an increase in hypothetical reading rates, as shown by the positive trendlines in Figure 1, would suggest a possible relationship between ER and reading rate in the hypothetical data shown.

In their paper on SCD standards, Kratochwill et al. (2010) explain the method used to analyze data collected from single-case research; i.e., visual analysis. They also further state that “[i]n single-case research, . . . [t]he process of [determining an effect] requires that the reader is presented with the individual unit’s raw data (typically in graphical format) and actively participates in the interpretation process (pp. 20-21). The current study’s data collection and analysis follows three steps (or parts) outlined in Kratochwill et al. (2010) applying three data features to examine within- and between-condition data patterns within SCDs. These features include 1) Level; 2) Trend; and 3) Variability. For a complete explanation of these data features and steps please see page 18 of Kratochwill et al. (2010). Three data features described in their publication, immediacy of the effect, overlap and consistency of data patterns across similar phases, were not used to determine a causal relationship in the current study as one cannot expect to observe an immediate effect based on the introduction or removal of ER (the independent variable) alone. This is because ER requires learners to read copious amounts of level-appropriate reading material over an extended period of time. Thus, in the current study comparisons across similar phases will be the focus; i.e., an increase in reading rates from initial to final baseline phases will be considered evidence of the positive effects of ER. Further details regarding changes across similar phases is discussed in more detail in the following section, 3.2.1.2 Baseline to baseline change.

3.2.1.2 Baseline to baseline change. The current study conducted comparisons of baseline reading rate scores as the main method of determining a functional relationship. Baseline comparisons indicate whether the ER treatment assists learners in increasing their reading rate on more difficult texts over time. As inferential statistics alone are inappropriate given the small number of participants that completed the study, descriptive statistics was the principal method used to assess baseline data. This entailed a thorough evaluation of data using the visual analysis standards discussed in Kratochwill et al. (2010) to show trends in learner reading rate. Moreover, trend lines and their directions across conditions were analyzed. Thus, trend lines with a positive slope across baseline conditions will be considered evidence of an effect of ER on reading rates of more difficult texts as well as a higher degree of language knowledge automaticity.

3.2.2 Ancillary statistical analyses. To support the findings of the visual analysis method described above and to further document the possible long-term effects of ER, ancillary inferential statistical analyses were also conducted. Two points in time were chosen for baseline to baseline and intervention to intervention comparisons. To observe changes in reading rate on intermediate-level reading passages, the averages of participants' first and second baseline reading rates were used. As two participants, Bruce and Noah, did not complete more than two baseline phases, the test scores collected during the second baseline phase were chosen as the comparison set (similar to a post-test). Thus, this compared participants' intermediate-level reading speed prior to engaging in ER and after reading 120,000 characters following ER principles. The averages of participants' initial five reading rate tests during the Intervention 1 and Intervention 2 phases, were then used to further observe changes in participants' elementary-level reading rates. This analysis compared participants' elementary-level reading speed at the

outset of their ER experience with their reading speed during the first few intervention meetings after having read 120,000 characters for ER. For both the baseline and intervention comparisons discussed here, the passage of time is represented by the 120,000 characters read by participants, which is the equivalent of 10 weeks of reading following ER principles based on a 12,000 character per week reading goal. Thus, two paired samples *t*-tests were run using IBM SPSS Statistics 25 to compare the eight participants' mean Baseline 1 and 2 scores as well as their mean Intervention 1 and 2 scores. Before running the analysis, the researcher confirmed that all the paired samples *t*-test assumptions were met. For the paired samples *t*-test analyses the α was set at .05. However, a Bonferroni correction was made due to conducting multiple (two) hypothesis tests, resulting in statistical significance being determined by an α of .025.

3.3 Participants

The current study used nonprobability sampling to identify potential participants. This sampling approach was necessary to identify individuals who met certain language proficiency criteria (i.e., intermediate-level JFL learners), as well as to recruit those who were able to commit to the demanding requirements of the study. Participants were recruited using public posts on Facebook, fliers, and through word of mouth. Furthermore, for all participants, this was their first experience with ER; i.e., participants were not familiar with the approach used. Thus, participants' opinions regarding the treatment were likely not formed prior to participating in the study.

In general, single-case designs include a very small number of participants due to the extended length of time and amount of effort required of both researchers and participants (Lammers & Badia, 2005). This study began with the goal of recruiting approximately six

intermediate-level JFL learners. Ultimately, 13 JFL learners enrolled in the study, eight of whom participated to completion. All participants were volunteers living around Brigham Young University (BYU) and Utah Valley University (UVU). Table 2 below provides some demographic information of the participants that completed the study as well as whether they were enrolled in a Japanese language course during the study or not. Names are pseudonyms given to participants at the beginning of the study. Descriptions of learner type are discussed below.

Table 2 Participant Demographic Data

Participant	Age	Sex	First Language	Enrolled in Japanese Course	Learner Type
Aiden	21	Male	English	No	Non-traditional
Alexander	24	Male	English	No	Non-traditional
Amber	27	Female	English	No	Traditional
Bruce	33	Male	English	No	Non-traditional
Caden	18	Male	English	Yes	Traditional
Liam	42	Male	English	No	Non-traditional
Noah	23	Male	English	No	Self-taught
Sophia	22	Female	English	Yes	Non-traditional

During the study, Caden and Sophia were enrolled in intermediate-level courses at BYU. Specifically, Caden was enrolled in a fifth-semester course and Sophia was enrolled in a sixth-semester course (both courses are described below). Sophia was also enrolled in a third-year conversation course which focused on presenting speeches in public settings, improving pronunciation, accent, and intonation, and increasing listening skills. The researcher is aware that classroom instruction may have affected Caden's and Sophia's results. However, as shown in Chapter 4 section 4.2.5 (see Tables 21-22), their reading rate gains were not the highest or lowest of the group and thus it is thought their coursework had a minimal effect on the results.

All other participants in the study were not enrolled in a Japanese course throughout the study. Furthermore, except for Liam, the current study was the only Japanese language learning activity all non-enrolled participants took part in for the duration of the study. Liam reported studying different aspects of Japanese (vocabulary, reading, etc.) on his own for at least one hour a day during the study.

3.3.1 Intermediate-level JFL learners at BYU. There are two main categories of students who enroll in intermediate-level courses at BYU. These students will be identified as traditional and non-traditional students. Traditional students have studied Japanese starting at the 100-level using the *Japanese: The spoken language* series of textbooks (Jordan & Noda, 1987) and have been taught using the Performed Culture method (Christensen & Warnick, 2006). Traditional students in fifth-semester Japanese have completed approximately 220 hours of classroom instruction (four semesters). Through the first four semesters of Japanese, traditional students study approximately 300 *kanji*.

Non-traditional students have studied Japanese as part of their missionary service for The Church of Jesus Christ of Latter-day Saints. During their missionary service, non-traditional students live and serve in Japan for 16 to 22 months. Prior to moving to Japan these students study Japanese intensively for two months, focusing on religious terminology. During their time in Japan, these learners do not study Japanese using any specific textbook and are self-taught. Besides the time they use Japanese to teach lessons on religious topics, these missionaries are allotted one hour each day to study Japanese. Many of these missionaries also teach English lessons once or twice a week. During their sojourn in Japan, non-traditional students often focus their studies on spoken Japanese. As a result, many enter the fifth-semester Japanese course at BYU with scant *kanji* knowledge. Although their speaking abilities are expected to be more

developed than their traditional student counterparts, their grammar, and *kanji* knowledge are frequently more limited.

3.3.2 Fifth- and sixth-semester Japanese courses at BYU. BYU's fifth- and sixth-semester Japanese courses focus on vocabulary, grammar, culture, and reading and writing essential characters. The textbook used in fifth-semester Japanese is *Toward better Japanese* (Watabe, 1993) and the textbook used in sixth-semester Japanese is *Intermediate reader: Japanese language and culture* (Watabe, 2002). Both courses are taught using the Performed Culture method. Each course also consists of approximately 55 hours of classroom instruction. In the fifth-semester course, students study 524 *kyōiku kanji* (Chinese characters taught in Japanese elementary schools, grades 1-6). Using those *kanji*, students also study 503 *kanji* compound words. Furthermore, 1,106 vocabulary items, and 127 grammar structures are taught in fifth-semester Japanese courses. In the sixth-semester course, students study 368 additional *kyōiku kanji*, and 243 *jōyō kanji* (*kanji* for common use). Using the 1,135 *kanji* from both fifth- and sixth-semester courses, sixth-semester students also study 420 additional *kanji* compound words. Moreover, 1,858 vocabulary items, and 77 grammar structures are also taught in sixth-semester Japanese classes.

As traditional and non-traditional students come from quite different learning backgrounds, fifth- and sixth-semester Japanese courses act as both a review of the previous four semesters or two years as well as a new academic learning experience to ensure both types of students are at approximately equal proficiency levels as they advance to higher level Japanese courses.

3.3.3 Fifth-semester Japanese courses at UVU. UVU's fifth-semester Japanese courses use *An integrated approach to intermediate Japanese* (Miura & McGloin, 2008) as its textbook. UVU's fifth-semester course focuses on the development of all language skills with emphasis on grammar review, reading and writing. The course also consists of approximately 42 hours of classroom instruction. In UVU's fifth-semester course, students study approximately 704 *kanji*. Furthermore, approximately 1,683 vocabulary items, and 154 grammar structures are taught in UVU's fifth-semester Japanese course.

3.3.4 Aiden. Aiden was somewhat unique in that he was a non-traditional student who had previously taken a fifth-semester Japanese language course at UVU and not BYU like all the other participants. Aiden was a software engineering major and had learned Japanese primarily from the 22 months he had lived in Japan as a missionary for The Church of Jesus Christ of Latter-day Saints. He had not visited Japan for any other purpose. Furthermore, his participation in the current study was the only Japanese language learning activity he was involved in throughout this research project.

For the present study, Aiden will serve as the focal point of data analysis. Aiden was chosen for a number of reasons. Specifically, Aiden did not study Japanese outside of the current research project. Aiden was also a good representative of intermediate-level learners with an intermediate proficiency level score on the Japanese Computer Adaptive Test (184) and an intermediate-level vocabulary size (6,100). He also provided a large amount of data (44 data points) over a long period of time (three months and 20 days) with no major interruptions in data collection. During intervention meetings he read 209,866 characters (127,364 words) across 68 books/reading passages. Furthermore, 83% of what he chose to read throughout the study was found to be elementary-level reading material. The remaining 17% was intermediate-level

reading material as determined by jReadability (Lee & Hasebe, 2016). Moreover, Aiden's percentage of elementary-level passages read was one of the highest out of all participants. A summary of Aiden's intervention meetings is located in Appendix A section A.1.

3.3.5 Alexander. Alexander was a comparative literature major at BYU minoring in Japanese. Prior to joining the study, he had completed four Japanese courses at BYU beyond the sixth-semester course. He also lived in Japan for 22 months as part of a mission. Alexander also reported having participated in a short study program in Japan for approximately 11 days.

3.3.6 Amber. Prior to the study, Amber had already graduated with a major in Japanese and a minor in visual arts from BYU. As part of her major, she indicated she had completed 10 Japanese courses beyond the sixth-semester course. Amber also had participated in a two-and-a-half-month English teaching internship in Japan during her undergraduate years and had taught English for one year following graduation. She also reported having gone to Japan for a total of six months throughout her life to visit relatives.

3.3.7 Bruce. Bruce was a former BYU student who had majored in information systems and minored in Japanese. Bruce was a non-traditional student, having done missionary service in Japan for 22 months prior to studying Japanese at BYU. He also had visited Japan for approximately nine days following his missionary service. Before graduating from BYU, Bruce completed three Japanese courses beyond the sixth-semester course.

3.3.8 Caden. Caden was a traditional BYU student majoring in psychology and was enrolled in BYU's fifth-semester Japanese course. He also reported having visited Japan for three weeks prior to the study.

3.3.9 Liam. Liam was also a former BYU student. As a student he majored in computer science and had completed just one Japanese course (BYU's fifth-semester course). He too had studied Japanese as part of a mission, 22 months of which was completed in Japan.

3.3.10 Noah. Noah was also a unique case. He was an applied physics major at BYU who had never taken a Japanese course before. He was also minoring in Italian. He was a completely self-taught intermediate-level JFL learner and had never been to Japan before. He reported that most of his Japanese studies up to the present research focused on learning vocabulary using flashcards. He also mentioned attempting to practicing speaking Japanese with his roommate who had lived in Japan for a time. In joining this study, he agreed to not study Japanese outside of what he did in the current project.

3.3.11 Sophia. Sophia was a BYU student majoring in Linguistics and minoring in Japanese. Although she was a non-traditional student in that she had lived in Japan for 16 months as a missionary, she had also taken the first two semesters of Japanese taught at BYU prior to her sojourn. Besides her time in Japan as a missionary, Sophia also indicated that she had spent an additional two weeks in Japan prior to the study.

3.4 Procedure

During the summer of 2018 a pilot study was conducted using a single-case extended reversal (A-B-A-B-A) design (see Table 3). In the fall semester, the main study was conducted using the same design. Using this approach, data was collected on the individual participants discussed above, each operating as their own control, effectively becoming multiple unique single-subject studies.

Table 3 Single-case Extended Reversal (A-B-A-B-A) Design

<u>Baseline</u>	<u>ER</u>	<u>Baseline</u>	<u>ER</u>	<u>Baseline</u>
1 Week	10 Weeks	1 Week	5 Weeks	1 Week
5 Tests	20 Tests	5 Tests	10 Tests	5 Tests

The first condition in a single-case study is the pretreatment condition which is often referred to as the baseline period. During the initial condition, participants in the current study filled out a demographic survey, completed a vocabulary size test and Japanese proficiency test, took five reading tests, and were given an explanation of the intervention (i.e., ER and its principles). The vocabulary size test was used to ascertain the breadth of participants' vocabulary knowledge. The proficiency test determined learner proficiency level. The first five reading tests then measured learner reading rate and also included comprehension discussion questions to determine the level of understanding the participants were able to achieve while reading. This initial baseline was then used to track reading rate gains in comparison with participants' final baseline conditions.

Once an initial baseline had been established, the intervention condition was introduced and maintained for a period of time based on the amount participants read. As Grabe (2014) suggests that two months of training is not sufficient enough to observe gains in reading fluency, the researcher set the initial treatment phase length at 10 weeks or its equivalent based on the number of characters read by participants. This was followed by further intervention conditions. However, in order to include multiple baseline/intervention phases over the course of the study, subsequent intervention phases were made shorter than 10 weeks. For example, the second intervention phase for most participants was finished after they had completed the equivalent of 5 weeks of reading. Moreover, most final intervention phases consisted of 5 weeks or less of

reading as university semesters were coming to an end and participants were taking final exams and leaving the area to go on break.

During intervention conditions, participants met with the researcher and engaged in ER, filled out reading logs, and completed reading tests. These reading sessions allowed the researcher to monitor participants and ensure that adherence to the best practices of ER were being upheld (see Awano et al., 2012; Day & Bamford, 2002; NPO Tadoku Supporters, 2011). To help participants remember and follow the ER principles and rules taught to them at the beginning of the study, the researcher displayed a list of the principles in a picture frame on a table during each ER meeting. What was displayed to participants during these ER sessions can be found in Appendix B. An idealized schedule of ER sessions is listed in Appendix C.

During the initial meeting the researcher discussed what ER is, what the best practices of ER are, and set reading goals. As suggested by Beglar and Hunt (2014), in order to achieve substantial reading rate gains through ER, a goal of 200,000 (six character) standard words read over 28 weeks should be set. To test the feasibility of such a goal among intermediate-level JFL learners, the researcher discussed and set a comparative goal with participants.

The following is an explanation of how a comparative goal was established. Standard word length in English (six character units) was originally determined in Carver (1972) by summing all letters, spaces, and symbols across four paragraphs of text and then dividing that number by the number of actual words in the text. This number produced an average of six-character spaces per word. In order to calculate the length of standard words in Japanese, for the current study, the author found the length of the first 20,000 most frequent words in Japanese based on Matsushita's (2011) Vocabulary Database for Reading Japanese. The weighted average length of the 20,000 most frequent Japanese words was then calculated and found to be 1.66

characters per word. Using this average, the current study calculated a minimum character (not character unit) reading goal of approximately 12,000 characters (7,200 standard Japanese words) per week. This is a transformation of Beglar and Hunt's 200,000 standard word goal; i.e., [(200,000 standard words * 1.66 characters on average per Japanese word)/28 weeks \approx 12,000 characters]. Table 4 summarizes this reading goal. Table 5 summarizes the amount of time needed to accomplish this reading goal based on differing reading rates in cpm.

Table 4 Minimum Reading Goal in Total Characters

<u>Each Weekday</u>	<u>Weekly</u>	<u>5th Week</u>	<u>10th Week</u>	<u>15th Week</u>	<u>17th Week</u>
2,400	12,000	60,000	120,000	180,000	204,000

Table 5 Minimum Reading Goal in Total Minutes as a Function of Reading Rate

<u>Reading Rate (cpm)</u>	<u>Each Weekday</u>	<u>Weekly</u>	<u>5th Week</u>	<u>10th Week</u>	<u>15th Week</u>	<u>17th Week</u>
85	29	142	706	1,412	2,118	2,400
100	24	120	600	1,200	1,800	2,040
115	21	105	522	1,044	1,566	1,774
135	18	89	445	889	1,334	1,512
150	16	80	400	800	1,200	1,360
165	15	73	364	728	1,091	1,237
185	13	65	325	649	973	1,103
200	12	60	300	600	900	1,020
215	12	56	280	559	838	949

Reading logs were also kept in order to record all necessary information in observing the amount of time spent engaged in reading, as well as to calculate the number of characters each participant read throughout the study. The number of characters participants read are reported in Chapter 4 section 4.2.3 (see Table 15) and are precise numbers, not approximations. To calculate the precise number of characters each participant read, the researcher meticulously created text

files for each passage or book participants read throughout the entire study. For printed books, the researcher typed up the text of the book to create the text file. Using the text files and Reading Fluency Solutions (Peterson & Peterson, 2017, 2018), the researcher then calculated the exact number of characters and words contained in each passage. After a participant read a passage or book the researcher updated the participant's reading log with the appropriate character and word counts. In the case that a participant only read a portion of a passage/book, the participant noted how far they got in their reading log and the researcher adjusted the character/word count for that entry accordingly. As participants' reading logs were kept in a digital spreadsheet format using Google Sheets, the running total of characters read by participants was constantly updated.

The study continued by removing and reinstating the experimental treatment, alternating between conditions. Table 6 shows an idealized model of data collection. This design is intended to demonstrate the effect of the independent variable, ER, on the dependent variable, reading rate.

Table 6 Overview of Research Design

<u>Condition</u>	<u>Weeks</u>	<u>Activities in Which Participants Engage</u>
Baseline	1 (1)	Questionnaire, Vocabulary Size Test, J-CAT, & 5 Reading Tests
Intervention	2-11 (10)	Extensive Reading, Reading Log Completion, & 20 Reading Tests
Baseline	12 (1)	5 Reading Tests
Intervention	13-17 (5)	Extensive Reading, Reading Log Completion, & 10 Reading Tests
Baseline	18 (1)	Questionnaire & 5 Reading Tests

As each participant had differing schedules, times and locations of weekly ER sessions were determined on a case-by-case basis. However, Tables 7 and 8 outline a detailed ideal schedule for data collection. Table 7 summarizes the initial seven weeks of the study acting as a pilot, while Table 8 shows the main study as a continuation of the pilot study. Continuing from the pilot study was necessary to implement the treatment beyond two months as suggested by Grabe (2014).

Table 7 Pilot Study Procedure

<u>Weeks</u>	<u>Month</u>	<u>Dates</u>	<u>Condition</u>	<u>Tests/Data Points</u>
1	June	24-30	Baseline	5
2		1-7	ER	2
3	July	8-14	ER	2
4		15-21	ER	2
5		22-28	ER	2
6	July/Aug.	29-4	ER	2
7	August	5-11	ER	2

Table 8 Main Study Procedure

<u>Weeks</u>	<u>Month</u>	<u>Dates</u>	<u>Condition</u>	<u>Tests/Data Points</u>
1	June	24-30	Baseline	5
2		1-7	ER	2
3	July	8-14	ER	2
4		15-21	ER	2
5		22-28	ER	2
6	July/Aug.	29-4	ER	2
7		5-11	ER	2
8	August	12-18	ER	2
9		19-25	ER	2
10	Aug./Sep.	26-1	ER	2
11		2-8	ER	2
12	September	9-15	Baseline	5
13		16-22	ER	2
14		23-29	ER	2
15	Sep./Oct.	30-6	ER	2
16		7-13	ER	2
17	October	14-20	ER	2
18		21-27	ER	2
19	Oct./Nov.	28-3	ER	2
20		4-10	ER	2
21	November	11-17	Baseline	5
22		18-24	ER	2
23	Nov./Dec.	25-1	ER	2
24	December	2-8	ER	2
25		9-15	ER	2

As the current study was exceedingly time-intensive, very few participants were able to complete the multi-week procedure. Given this, the length and meeting dates enveloped in each condition were adjusted to fit individual participants' needs and schedules. Nevertheless, the order of conditions (A-B-A-B-A) remained constant across participants. Thus, the current study's single-case reversal design will provide a rigorous structure for observing participant reading rate gain, becoming, in effect, a quantitative case study (Duff, 2008).

3.5 Materials

3.5.1 Reading materials for extensive reading. Participants were given access to a digital database, in spreadsheet form, which contains information on a wide variety of over 5,600 texts available for them to read. This included information such as genre, location (where they can find the text), title, whether the text uses *furigana* or not, the approximate level of difficulty, web address (if applicable), and other information (e.g., number of texts available, notes, etc.). The database contained information for both graded readers as well as texts written for Japanese natives (including children and adults). Table 9 summarizes the texts that were made available, most of which were in a digital format.

Table 9 Texts Available

<u>Type</u>	<u>Number Available</u>
Level 0	43
Level 1	62
Level 2	78
Level 3	35
Level 4	33
Level 5	2
Total	253
In print	152
Folk Tales	3,135
Children's Stories	>2,234
Manga	Numerous
Blogs	Numerous
<i>Keitai</i> (Mobile) Novels	Numerous
News	Numerous
Literature in the Public Domain	Numerous
Total:	>5,622

3.5.2 Questionnaire. At the beginning and end of the study, participants completed demographic and perceptions surveys using Qualtrics. These were used to determine participants' Japanese language background as well as how participants felt about ER. Questions asked on the questionnaires are located in Appendix D. Furthermore, many of the questions posed on the Post-study Questionnaire were adapted from questions used in Lin, Choo, and Pandian's (2012) study on the motivational effects of Sustained Silent Reading, a reading program similar to ER.

3.6 Measurement

3.6.1 Vocabulary size assessment. During the initial baseline condition participants took a vocabulary size test to determine the breadth of their vocabulary knowledge. This test was used to confirm that the word level (e.g., first 4,000 words) of the reading rate assessments during the intervention aligned appropriately with participant vocabulary size. Specifically, participants' vocabulary size was assessed using the Vocabulary Size Test for Reading Japanese (Matsushita, 2012a, 2012b). The Vocabulary Size Test for Reading Japanese was developed in 2012 by Tatsuhiko Matsushita in response to the small amount of research conducted on vocabulary size growth. The test contains 150 items that have been based on a controlled sampling of word types and parts of speech. Furthermore, the test has shown a high level of reliability (Rasch reliability estimate = .93) in trial runs with 270 participants. Table 10 below summarizes the vocabulary sizes of participants who completed the current study in descending order. Although Bruce's vocabulary size was found to be lower than 4,000, his vocabulary score on the Japanese Computer Adaptive Test (34) was equal to Aiden's score, with Aiden's vocabulary size being 6,100. This seemed to indicate that Bruce's vocabulary size was likely closer to the 4,000-

headword level than the 2,400-headword level indicated by the Vocabulary Size Test for Reading Japanese.

Table 10 Participant Vocabulary Size

Participant	Vocabulary Size
Alexander	11,600
Amber	9,900
Caden	9,100
Sophia	6,700
Aiden	6,100
Liam	5,900
Noah	4,700
Bruce	2,400

3.6.2 Proficiency assessment. Prior to initiating the intervention condition, participants also registered for and completed the Japanese Computer Adaptive Test (J-CAT) in a proctored environment. The J-CAT was used to determine participants' approximate level of overall Japanese proficiency. The J-CAT Project Team has determined that an overall score of 100-250 on the J-CAT is indicative of an intermediate-level learner (J-CAT Project Team, 2018). The current study followed this interpretation. The J-CAT was used for two main purposes. The first was to verify that all participants had intermediate-level proficiency. The second purpose was to align reading test difficulty with learner proficiency level, which will be discussed in more detail in section 3.6.3 below. Table 11 below summarizes participants' J-CAT results in descending order of total score. Three participants scored in the intermediate-high sub-range, three in the intermediate sub-range, and two in the pre-intermediate (i.e., intermediate-low) sub-range.

Table 11 Participant J-CAT Results

Participant	Proficiency Level	Total	Listening	Vocabulary	Grammar	Reading
Amber	IH	227	63	61	44	59
Alexander	IH	221	63	50	55	53
Caden	IH	200	56	45	47	52
Aiden	I	184	64	34	44	42
Bruce	I	166	61	34	45	26
Sophia	I	155	55	40	29	31
Liam	PI	133	20	50	32	31
Noah	PI	106	12	34	29	31

Note. IH: Intermediate-High; I: Intermediate; PI: Pre-Intermediate

3.6.3 Reading tests. Throughout the study reading tests were used to track learner reading rate and approximate level of comprehension (see Appendix E sections E.3 and E.4 for reading test samples). Reading rate was calculated in characters per minute (cpm). As participants were also required to give a retelling of what they read, and were asked follow-up probe questions following each test, it was determined that participants were not just skimming or scanning the passages. Thus, participants' reading rates reflect actual cpm read, and are not adjusted for skimming or scanning.

Participants took each test individually with the researcher. These assessments were completed using level-appropriate unpracticed reading passages followed by a reading comprehension discussion. Reading passages used as intervention tests averaged 681 characters in length (i.e., 403 words long). Reading passages used as baseline tests averaged 858 characters in length (i.e., 527 words long). The number of characters and words each passage contained was calculated using Reading Fluency Solutions (Peterson & Peterson, 2017, 2018). Reading Fluency Solutions was created by the author of this dissertation and is a multi-functional, reading fluency

building application. One function of Reading Fluency Solutions is to morphologically analyze Japanese texts and return the total number of morphemes (i.e., words), characters, and morae contained in the passage excluding spaces and symbols.

Level-appropriateness of test passages was determined using a combination of four tools: the Vocabulary Size Test for Reading Japanese, the J-CAT, a Japanese lexical analysis tool (J-LEX, see: Suganaga and Matsushita, (2013)), and a passage readability classification application (jReadability, see: Lee and Hasebe, (2016)).

3.6.3.1 Baseline assessments. Difficulty of reading tests during baselines was set at a criterion level of intermediate and a 98% word level of 4,000 headwords. This criterion aligned with participants' vocabulary sizes and proficiency levels. To control the difficulty level of reading tests, 98-100% of each passages' running words (excluding English loan words and proper nouns) were limited to those that were within the criterion vocabulary size of 4,000 headwords as determined by a lexical analysis of the passages using J-LEX (Suganaga & Matsushita, 2013). (Specific words excluded from this analysis are indicated in the summary of the tests located in Appendix E sections E.1 and E.2.) Moreover, the readability level of each passage, as determined by jReadability (Lee & Hasebe, 2016), was aligned with the level of proficiency each participant demonstrated on the J-CAT. Specifically, all baseline tests were determined to be intermediate-level passages based on their jReadability score. A summary of baseline test data is presented in Appendix E section E.1.

3.6.3.2 Intervention assessments. Reading tests during intervention conditions were created using higher frequency words and reflect a higher readability level than those used during the baseline conditions. Specifically, the difficulty level of all intervention tests was

determined to be elementary level based on their jReadability score. Furthermore, 98-100% of each intervention passages' running words (excluding English loan words and proper nouns) were limited to those that were within an elementary vocabulary size of at most 1,285 headwords as determined by J-LEX. A summary of intervention test data is included in Appendix E section E.2.

As the difficulty of baseline test passages was aligned with participants' current proficiency level (intermediate), these tests were designed to closely represent the types of passages students are often accustomed to reading in intermediate-level university courses and not to challenge participants' comprehension abilities. As the difficulty of intervention test passages was set at the elementary level, they were designed to represent more closely the difficulty level of passages participants were likely to read during the ER treatment sessions. (Moreover, as the vast majority of what participants chose to read during ER sessions was in fact elementary-level reading material, this assumption was found to be accurate.) In order to assess the effects of the ER treatment on reading rates, participants needed to be doing as the name suggests and read many easy passages during intervention phases. Thus, the difficulty of intervention test passages was set at a lower level in order to consistently provide participants with easier reading materials that would assist them in building their reading speed. The baseline tests were then used to assess the effects of ER on participants' long-term gains in reading rate. Thus, if following the treatment it was found that baseline and intervention reading rates increased across similar phases, we would be able to suggest that ER will likely not only improve one's reading rate of similar-level, easy materials, but also lead to reading rate gains on even more difficult materials.

As with the baseline tests, the intervention reading tests consisted of a single-sided test page as well as an oral discussion of the passage to assess reader comprehension. On the front of each test page was a reading passage. The back side was left blank.

In the same manner as the baseline tests, prior to taking the intervention tests the researcher explained the testing procedure to participants, including the format of the tests. The explanation included instructions to read the passage as quickly as possible while still comprehending the whole text. Following this explanation, tests were presented to participants with the printed passage face down. The researcher then instructed participants to flip the page over and begin reading. Using a stopwatch, the researcher then timed how long it took for each participant to read each passage. Once completed, participants returned the test to the research and the researcher recorded the participant's time.

The researcher then discussed the passage with the participant by first asking participants to give the main idea of the passage along with a summary of what they read. These comprehension discussions were used to assess the participant's reading comprehension. Follow-up questions were also used to further assess the comprehension of the learner (see Appendix E section E.5). Comprehension discussions were audio recorded for a second rater to grade.

Reading rate and comprehension was then calculated. Previously, no precedent has been set on what unit should be used as a temporal measure of fluency in research. In the JFL setting, words per minute has been used in a previous study (Tabata-Sandom, 2017) while in other studies raw wpm (Allen, 2016) or standard wpm (i.e., number of 6 character units per minute) (Beglar et al., 2012) has been used. As words differ in length, the current study follows a similar approach to standard wpm and adopted characters per minute as its temporal measure of fluency. Character counts, rather than word counts, are also often indicated on Japanese graded reader

textbooks making it easier to calculate total number of characters read rather than total number of words. Thus, learner reading rate was calculated by taking the number of characters (excluding spaces, and other symbols such as punctuation marks) in each passage and dividing it by each participant's finishing time.

Following testing, comprehension was calculated using the grading rubric located in Appendix E section E.5. Comprehension raters determined participants' comprehension of each baseline and intervention phase test. One of the main raters was a native speaker of Japanese who was a Japanese-English bilingual. The second main rater was an English native speaker who also had near-native Japanese ability; i.e., the second main rater had a Superior level certification on the American Council on the Teaching of Foreign Languages' (ACTFL) Japanese Oral Proficiency Interview (OPI) as well as an N1 certification on the Japanese Language Proficiency Test (JLPT). The researcher was one of the main raters. Each rater graded participants' comprehension with no knowledge of the other raters' assigned rating. In a small number of cases where the two main raters scores did not match, a third native Japanese speaker (Japanese-English bilingual) rated the participants' comprehension. The participants' comprehension was then based on which two of the raters' scores matched. The third rater was not made aware of the two main raters' assigned ratings.

3.6.4 Learner perceptions. Learner perceptions of personal reading speed as well as the utility and enjoyment experienced while engaged in ER was assessed through pre- and post-study questionnaires. The pre-treatment questionnaire was a 26-item survey, 16 items covered participants' demographic information and 10 items assessed participants' pre-treatment perception of their approach and perceptions of reading in Japanese. The post-treatment questionnaire was a 57-item survey containing one demographic question, and 56 questions

regarding their perceptions of ER and reading in Japanese in general. Questions on the perceptions surveys are presented in Appendix D.

CHAPTER 4. RESULTS AND DISCUSSION

4.1 Overview

This chapter presents a discussion of the results of the current study looking first at the effects of extensive reading (ER) on reading rate gains and ending with the results of the post-intervention questionnaire.

4.2 Research Questions 1-2

RQ1. What is the average reading rate of intermediate-level JFL learners prior to and following engagement in ER?

RQ2. Will ER lead to reading rate gains in intermediate-level JFL learners?

4.2.1 Participants' average reading rate prior to and following engagement in ER.

This section presents information on the reading rates of participants at the outset of the study as well as in the final phases of their participation. The following will present the findings as it pertains to elementary-level reading through intervention test scores and intermediate-level reading through baseline test scores.

Table 12 summarizes participants' average reading rates at the outset and completion of the study. At the outset of the study participants had an average elementary-level reading rate of 183 cpm (110 standard wpm). At completion, participants had an average of 233 cpm (140 standard wpm). When averaged by J-CAT level, Intermediate-High (IH) participants began the study with an average elementary-level reading rate of 239-257 cpm. J-CAT Intermediate (I) participants began at 163-170 cpm, and Pre-Intermediate (PI) participants at 122-130 cpm. At the

end of the study, IH participants' elementary-level reading rate was 308-320 cpm, J-CAT I participants' rate was 204-205 cpm, and PI was 145-149 cpm.

At the beginning of the study participants' intermediate-level reading rate averaged 113 cpm (68 standard wpm). At completion, intermediate-level reading rates averaged 157 cpm (95 standard wpm). Looking at J-CAT levels, IH participants began the study with an intermediate-level reading rate of 162 cpm and ended with a rate of 217 cpm. J-CAT I participants started at 97 cpm and finished at 140 cpm on average. Finally, PI participants had an average of 62 cpm at the outset and completed the study at 94 cpm on intermediate-level reading passages. Table 12 further shows the progress participants made in building reading speed. Furthermore, the data show that participants in the J-CAT sub-levels I and PI began to approach the initial reading rates of one sub-level higher (IH and I respectively) at the completion of the study.

These results are similar to those found by Hashimoto et al. (1997). In Hashimoto et al., multiple groups were created based on initial reading rates. The group that had the largest gains (group ER4) was also one of the groups that read the most and also had one of the slower initial reading rates (67 wpm). At completion group ER4 was reading at 108 wpm. These reading rate gains are similar to those of the current study's participants' baseline initial and final reading rates. This seems to suggest that the participants in the present study began with slower reading rates. Furthermore, as Hashimoto et al. was conducted over eight months, this further suggests that the amount of ER completed (12,000 characters per week) by participants in the current study was substantial enough to accomplish similar gains in less than half the time.

Besides similarities with Hashimoto et al. (1997) in initial and final reading rates, similarities were also found in the reading rates of the ER1 group (second-year Taiwanese junior high school EFL students) in Sheu (2003), and the ER group (male Saudi Arabian university

EFL students) in Al-Homoud and Schmitt (2009). However, when reviewing the remaining previous studies that explored reading rate gains from ER, most included participants whose initial and final reading rates were much higher, closer to the current study's intervention reading rates. This may indicate that the reading passages used as tests in previous research was at an easier level for participants similar to the intervention reading rate test passages used in the current study. It could also reflect the different level of participants in previous studies; i.e., the university students used in previous studies may have been more advanced than the intermediate-level students in the present study.

Table 12 Participants' Average Reading Rates at the Outset and Completion of the Study

	<u>Average of Initial/Final Set of 5 Tests</u>				<u>Average of Phase</u>			
	<u>Baseline (Initial)</u>	<u>Baseline (Final)</u>	<u>Intervention (Initial)</u>	<u>Intervention (Final)</u>	<u>B1</u>	<u>Last Baseline</u>	<u>I1</u>	<u>Last Intervention</u>
Aiden	103.56	161.01	178.12	216.85	103.56	161.01	183.29	216.85
Alexander	153.35	233.07	202.01	308.20	153.35	233.07	237.74	308.20
Amber	195.48	229.73	232.31	338.32	195.48	229.73	257.31	338.32
Bruce	67.44	102.16	96.39	131.55	67.44	102.16	117.11	129.88
Caden	136.04	190.02	283.24	312.74	136.04	190.02	275.37	278.17
Liam	62.55	81.90	121.95	112.40	62.55	81.90	108.26	120.12
Noah	61.81	105.49	137.95	177.31	61.81	105.49	136.26	177.31
Sophia	120.74	155.51	213.16	266.50	120.74	155.51	208.82	266.50
Average	112.62	157.36	183.14	232.98	112.62	157.36	190.52	229.42
IH Average	161.62	217.61	239.19	319.75	161.62	217.61	256.81	308.23
I Average	97.25	139.56	162.56	204.97	97.25	139.56	169.74	204.41
PI Average	62.18	93.70	129.95	144.85	62.18	93.70	122.26	148.72

Note. IH, I, and PI are the J-CAT levels of participants.

4.2.2 The effects of ER. The methods discussed in the previous chapter will be used in assessing the effect of the ER treatment on participant reading rates. Specifically, longitudinal data collected over multiple months will show the effect of the treatment on participants' reading rates. The total change in learner reading rates after reading 120,000 characters (the equivalent of 10-weeks of reading) will then be used in ancillary statistical analyses to support the results of the visual analysis.

This section begins with a summary of the ER data collected from participants with a focus on the primary participant, Aiden. Although most data reported here will focus around Aiden's four-month participation in the study, data collected from seven other participants will also be used to bolster the findings of Aiden's single-case study. Data will be presented following the procedures indicated in the previous chapter as well as in Kratochwill et al. (2010).

4.2.3 Overview of ER data. This section will provide more context for the reading rate analysis that follows and focuses on data collected from Aiden. Specifically, this section will report key information regarding Aiden's participation in the current study. Aiden began participation in the study on August 17, 2018 and finished on December 7, 2018. He participated for 16 weeks, during which he met with the researcher 33 times to complete ER, baseline tests, and intervention tests. Of the 33 times Aiden met with the researcher, 30 were ER meetings, where the researcher monitored Aiden's reading and assisted him in finding books that would interest him and be at an appropriate level for conducting ER. These 30 ER meetings lasted an average of one hour and 12 minutes, for a total of 36 hours and 19 minutes. A detailed log of intervention meetings Aiden attended is provided in Appendix A section A.2. Tables 13 and 14 provide a summary of the ER Aiden completed during these ER meetings as well as a summary

of the reading tests he took. Specifically, of the 36 hours in which Aiden met with the researcher for completing ER, 25 hours was spent actually reading. The bulk of the remaining 11 hours was spent perusing books available to read, and/or receiving assistance from the researcher, but also included the time it took to complete the intervention reading tests. He also spent one hour and 38 minutes reading passages used in the baseline tests.

Over the course of the study, each participant completed multiple baseline and intervention phases. In order to provide ample time for participants to engage in ER before assessing their reading rate during a second baseline phase, the initial intervention phase length was set to the equivalent of 10 weeks based on number of characters read. In other words, the second baseline phase began only after participants had read 120,000 characters during the initial intervention phase. In order to assess learners reading rate across multiple intervention phases, subsequent intervention phase lengths were set at a shorter length based on reading 60,000 characters or the equivalent of 5 weeks of reading. As all participants exited the study during an intervention phase, the length of their final intervention phases was shorter than the equivalent of 5 weeks; i.e., they exited the study before reading 60,000 characters during their final phases. This is clear when reviewing Aiden's data shown in Table 13, which indicates his initial intervention phase consisting of 120,000 characters read, his second as 60,000, and his final as 30,000.

Table 13 Summary of ER completed by Aiden during Intervention (ER) phases

<u>Phase</u>	<u>Characters Read</u>	<u>Words Read</u>	<u>Passages Read</u>	<u>Time Spent Reading</u>	<u>Dates</u>
Intervention 1	120,038	73,534	45	14 Hours 32 Minutes	8/18-10/10 (8 Weeks)
Intervention 2	59,942	36,631	15	7 Hours 35 Minutes	10/17-11/14 (4 Weeks)
Intervention 3	29,886	17,199	8	3 Hours 9 Minutes	11/24-12/7 (2 Weeks)
Total	209,866	127,364	68	25 Hours 16 Minutes	8/18-12/7 (16 Weeks)

Note. 83% of what Aiden chose to read was found to be elementary-level reading material.

Table 14 Summary of reading tests completed by Aiden in each phase of participation

<u>Phase</u>	<u>Characters Read</u>	<u>Words Read</u>	<u>Passages Read</u>	<u>Time Spent Reading</u>	<u>Dates</u>
Baseline 1	4,468	2,718	5	44 Minutes	8/17
Intervention 1	11,275	6,658	16	1 Hour 3 Minutes	8/18-10/10 (8 Weeks)
Baseline 2	4,182	2,573	5	25 Minutes	10/10
Intervention 2	5,142	3,168	8	26 Minutes	10/17-11/14 (4 Weeks)
Baseline 3	4,612	2,852	5	29 Minutes	11/19
Intervention 3	3,552	2,026	5	17 Minutes	11/24-12/7 (2 Weeks)

Note. jReadability of Baseline phase passages was set at the intermediate level.

jReadability of Intervention phase passages was set at the elementary level.

Over the course of the study Aiden read 68 books or passages of his choosing totaling 209,866 characters or 127,364 words. Each passage Aiden read was analyzed using jReadability. According to the jReadability analysis, 83% of what Aiden chose to read was elementary-level reading material. The remaining 17% was at the intermediate level. Furthermore, 94% of what he read was printed material and 6% was digital. Aiden's detailed ER log is provided in Appendix A section A.2.

Aiden also read 15 baseline test passages and 29 intervention test passages chosen by the researcher. Intermediate-level reading passages, as determined by jReadability, were used for baseline tests, while elementary-level passages were used for intervention tests. All ER and tests completed were monitored by the researcher.

Table 15 below presents a summary of the ER completed by each participant. Specifically, this table indicates that the intermediate-level learners in the current study participated from 10-18.5 weeks reading from 152,322 characters up to 316,732 characters. Time spent doing ER in the study by all participants totaled 213 hours and 33 minutes and averaged 26 hours and 42 minutes per participant. Combined, participants also read a total of 1,778,149 characters (1,066,468 words) and 786 passages. The number of weeks indicated is the total number of weeks learners participated in the study including baseline phases.

Table 15 Summary of Total ER Completed by Participants During Intervention (ER) Phases

<u>Participant</u>	<u>Characters</u> <u>Read</u>	<u>Words</u> <u>Read</u>	<u>Passages</u> <u>Read</u>	<u>Time Spent Reading</u>	<u>Weeks</u>
Aiden	209,866	127,364	68	25 Hours 16 Minutes	16
Alexander	199,408	119,593	49	23 Hours 28 Minutes	18.5
Amber	316,732	186,766	68	33 Hours 30 Minutes	17
Bruce	165,737	99,360	119	26 Hours 26 Minutes	14
Caden	268,513	162,109	92	21 Hours 38 Minutes	13
Liam	248,639	149,829	157	46 Hours 52 Minutes	16
Noah	152,322	90,453	145	17 Hours 06 Minutes	10
Sophia	216,932	130,994	88	19 Hours 17 Minutes	11.5

Table 16 below summarizes the number of characters read by each participant at each difficulty level (elementary and intermediate) presented in descending order of the percentage of characters that were in elementary-level reading passages. No participant read advanced-level passages. The vast majority of what participants chose to read during ER sessions was elementary-level reading material. This ranged from 61% elementary-level reading for Alexander up to 93% for Noah. At the beginning of the study the researcher explained the ER rules and principles and continued to remind participants throughout the study that they should be reading material that is at their level (i.e., easy reading material). This along with participants being conscious of their own intermediate-level abilities is likely the reason for the high ratio of elementary to intermediate-level reading material chosen by participants. As there was a variety of texts available to participants beyond the elementary level, it is less likely participants' decisions were based on the content of the reading materials.

Table 16 Number of Characters Read at Each Difficulty Level During Intervention

<u>Participant</u>	<u>Elementary</u>	<u>Intermediate</u>	<u>Total</u>	<u>Elementary Percentage</u>	<u>Intermediate Percentage</u>	<u>J-CAT Level</u>
Noah	141,043	11,279	152,322	93%	7%	PI
Bruce	139,298	26,439	165,737	84%	16%	I
Aiden	174,726	35,140	209,866	83%	17%	I
Liam	201,137	47,502	248,639	81%	19%	PI
Sophia	173,777	43,155	216,932	80%	20%	I
Caden	195,304	73,209	268,513	73%	27%	IH
Amber	219,095	97,637	316,732	69%	31%	IH
Alexander	121,491	77,917	199,408	61%	39%	IH

4.2.4 Effect of ER on reading rate gains: Results of the visual analysis. To assess the effect of ER on participants' reading rate gains, this section will present three features of Aiden's baseline and intervention phase data presented in line graphs. Specifically, Aiden's data will be used to examine the following data patterns: (1.) level, (2.) trend, and (3.) variability.

4.2.4.1 Part 1: Aiden's Baseline 1 data. Prior to completing any ER, Aiden completed five baseline tests to determine what his reading rate was for intermediate-level texts. Table 17 below summarizes Aiden's reading rate for the first five baseline and intervention tests as well as the average of those tests. The data show a 75 character per minute (cpm, henceforth) difference between the average of his Baseline 1 (B1) scores and the following five Intervention 1 (I1) scores. This demonstrates a relatively low reading rate when compared with what he was able to accomplish on the elementary-level texts used in the initial intervention tests.

Table 17 Aiden's Reading Rate on Initial Baseline and Intervention Tests in cpm

<u>Test</u>	<u>Baseline</u>	<u>Intervention</u>
1.1	105.49	144.79
1.2	119.19	204.35
1.3	98.92	175.65
1.4	79.67	192.97
1.5	114.55	172.84
Average	103.56	178.12

Current research on reading fluency for adult L2 learners is limited and overall target reading rate ranges have yet to be established in the field (Carver, 2000). However, Waring (2000) suggests L2 learners reach a reading rate of 150 wpm before attempting higher difficulty materials. Furthermore, Allen (2016) suggests an adult L2 reading rate target of 225-250 wpm for silent reading fluency. Using the Japanese word to character conversion discussed in Chapter 3 section 3.4 (i.e., 1 Japanese word \approx 1.66 characters on average), Waring and Allen's suggestions would convert to a target reading rate of 373-415 cpm (225-250 wpm) for Japanese language learners. This range further suggests that Aiden's initial reading rate was relatively low and shows room for improvement.

The data in Figure 2 below demonstrate Aiden's B1 phase with 5 reading tests, with an average reading rate of 103.56 cpm. Reading rates range from 79.67 cpm to 119.19 cpm within the phase. The standard deviation (SD) about the best-fitting straight line for these data was found to be low at 13.53 cpm. These data provide a clear pattern of relatively low reading rates.

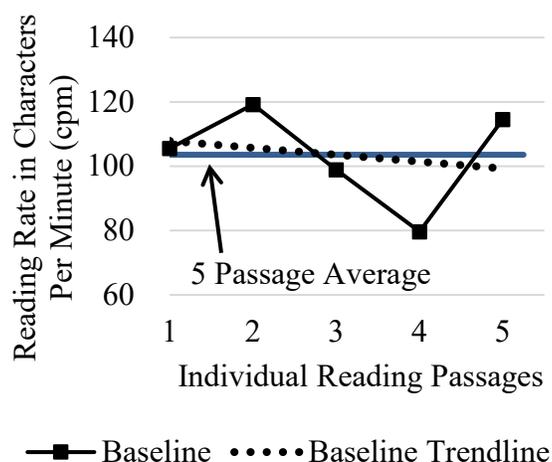


Figure 2 Aiden's B1 Reading Rates.

4.2.4.2 Part 2: Level, trend, and variability of Aiden's data. Table 18 shows the levels or average reading rates for each phase of Aiden's case study in cpm. Furthermore, the horizontal lines in Figure 3 below illustrate the comparison of phase levels. These tables and figures indicate that the levels of the data differ dramatically from initial to final phases. The levels show an overall increase in average reading rate over time for both baseline and intervention phases.

Table 18 Aiden's Phase Levels

<u>Phase</u>	<u>Baseline</u>	<u>Intervention</u>
1	103.56	183.29
2	165.76	198.96
3	161.01	216.85

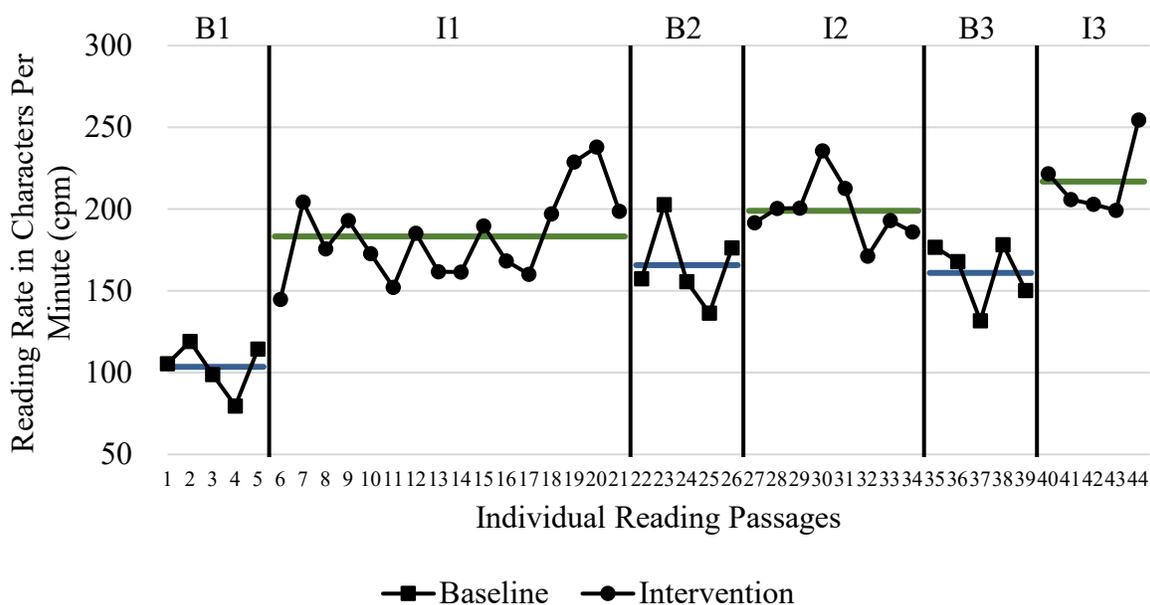


Figure 3 Level Assessment in Aiden's Case
Note. B: Baseline, I: Intervention

Table 19 shows the trend, or slope, of the best-fitting straight line for the data within each phase of Aiden's case study in cpm. Furthermore, the lines in Figure 4 illustrate the comparison of phase trends. These tables and figures show that, in general, similar phases have comparable trend data. Specifically, the trends for I1 and Intervention 3 (I3) are positive while all baseline phase trends are negative.

Table 19 Aiden's Phase Trends

<u>Phase</u>	<u>Baseline</u>	<u>Intervention</u>
1	-2.14	2.76
2	-2.87	-2.23
3	-4.27	5.92

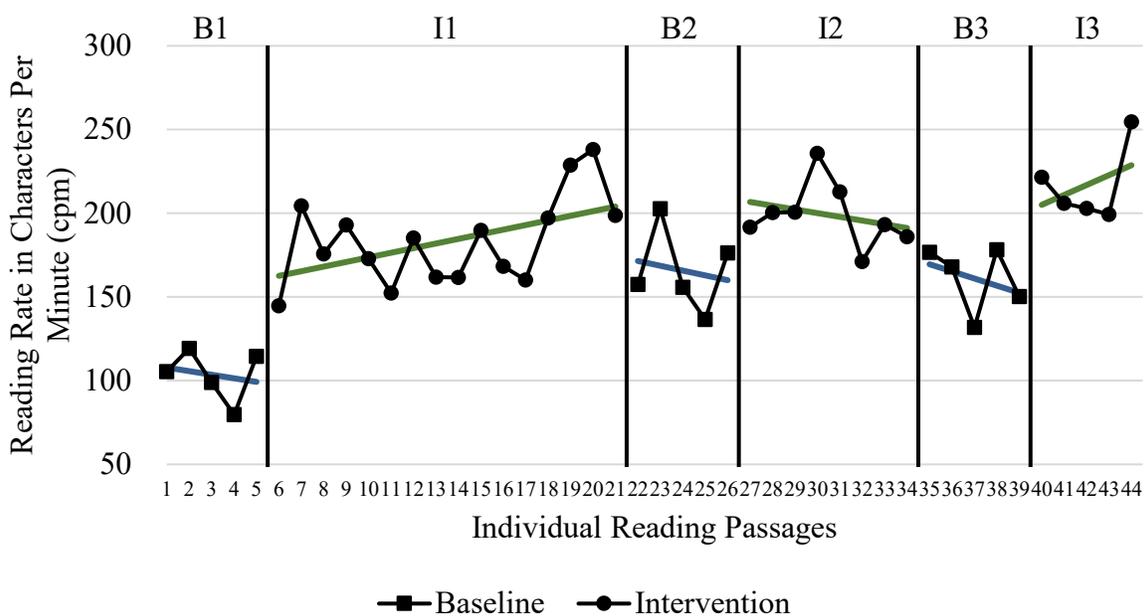


Figure 4 Trend Assessment in Aiden's Case

Table 20 provides the variability or the standard deviation (SD) of data about the best-fitting straight line for the data within each phase of Aiden's case study in cpm. Although the range of reading rates is expected to differ from phase to phase as reading rates increase, the SD of data is relatively similar. The upper and lower defining range lines in Figure 5 below further illustrate the variability of data in each phase. The initial baseline had the lowest variability with a SD of 13.53 cpm. As I1 was conducted over seven weeks and showed an increase in intervention test reading rates, it had the highest SD of 22.08 cpm. The SDs of phases beyond the initial baseline phase ranged from 16.60 cpm to 22.08 cpm.

Table 20 Variability in Aiden's Data

Phase	Baseline		Intervention	
	SD	Range	SD	Range
1	13.53	39.53	22.08	93.28
2	22.00	66.22	17.19	64.51
3	16.60	46.43	18.49	55.19

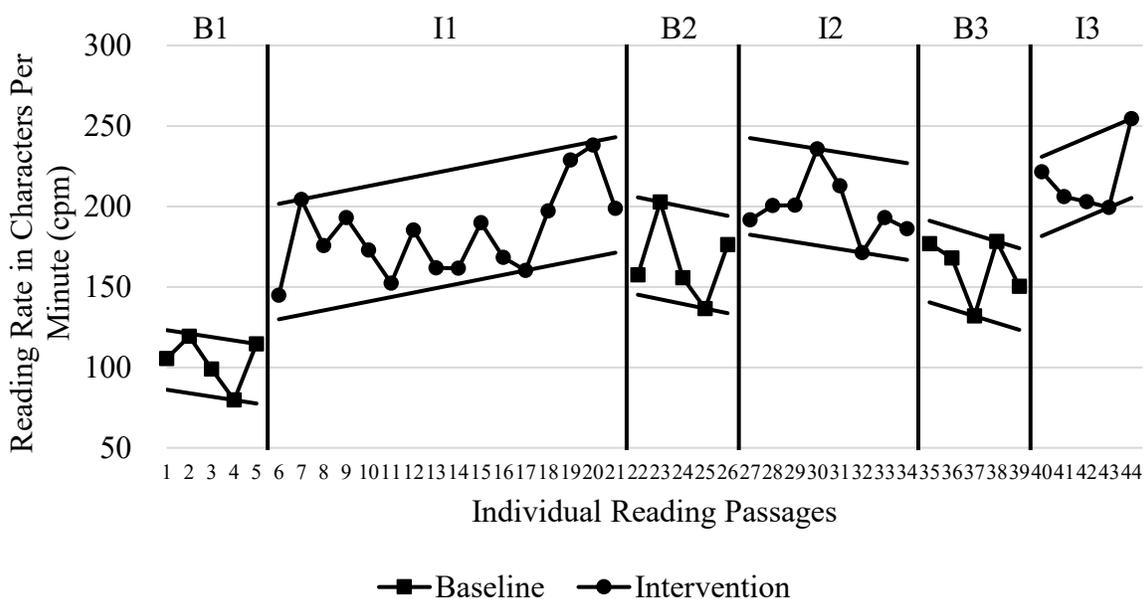


Figure 5 Variability Assessment in Aiden's Case

4.2.4.3 Part 3: Combining information from parts 1-2. Parts 1-2 above have focused on Aiden's data. Part 1 documented a pattern of relatively and consistently low reading rates for Aiden and room for growth. Specifically, Aiden's initial baseline reading rate averaged 104 cpm. Part 1 also documented Aiden's initial reading rate pattern having sufficiently consistent level and variability, with only a slight negative trend. Had his reading been left unaddressed it would have been expected to continue in the 80 to 120 cpm range.

Part 2 illustrated the dramatic change in average reading rates from initial phases to final phases in Aiden's case. Changes in variability were less dramatic. The change in baseline and intervention reading rates over time demonstrates a pattern of responding. Specifically, Aiden's data show that he was responding well to the ER treatment with final baseline/intervention phase reading rates considerably higher than his initial phase reading rates. The differences between Aiden's initial and final phase data document his response to the ER treatment and suggest ER led to higher reading rates.

4.2.5 Further data overview and changes in reading rate. To assess the effect of ER on participants' reading rate gains, this section will further present an overview of the data collected from all participants over multiple months with a focus on Aiden's data. Tables 21 and 22 summarize the baseline and intervention reading rate data respectively. Initial reading rates indicate the average of participants' first five baseline or intervention test scores in cpm. Final reading rates are the average of participants' last five baseline or intervention test scores. The gain indicates the difference between participants' final and initial reading rate scores. At the beginning of the study participants were asked to make a goal of reading 12,000 characters per week. Thus, 12,000 characters will be called a weekly goal unit (WGU). Tables 21 and 22 summarize the number of WGUs participants completed. In other words, the WGU indicates how many weeks' worth of reading participants completed based on the 12,000 character-per-week goal. For example, during the intervention phases Aiden read 209,866 characters. Although the total number of weeks Aiden participated in the study was 16, he read the equivalent of 17.49 weeks' worth of reading material. The tables also summarize the reading rate gain per WGU read; i.e., the number of cpm participants improved per 12,000 characters read. Both tables list data in descending order of gain per WGU read. Finally, these tables also give the number of actual weeks between the initial and final reading rate tests as well as the number of cpm participants improved per week.

Table 21 Baseline Reading Rate Data

<u>Participant</u>	<u>Initial</u>	<u>Final</u>	<u>Gain</u>	<u>Characters Read</u>	<u>WGUs Read</u>	<u>Gain/WGU Read</u>	<u>Weeks Between Assessments</u>	<u>Gain/Week</u>
Alexander	153.35	233.07	79.72	199,408	16.62	4.80	15.86	5.03
Noah	61.81	105.49	43.68	152,322	12.69	3.44	8.00	5.46
Aiden	103.56	161.01	57.45	209,866	17.49	3.28	13.43	4.28
Bruce	67.44	102.16	34.71	165,737	13.81	2.51	10.57	3.28
Caden	136.04	190.02	53.98	268,513	22.38	2.41	8.00	6.75
Sophia	120.74	155.51	34.78	216,932	18.08	1.92	10.57	3.29
Amber	195.48	229.73	34.25	316,732	26.39	1.30	15.57	2.20
Liam	62.55	81.90	19.36	248,639	20.72	0.93	11.86	1.63

Note. WGU: Weekly Goal Unit (12,000 Characters), Gain/WGU Read: Gain per 12,000 Characters Read

Table 22 Intervention Reading Rate Data

<u>Participant</u>	<u>Initial</u>	<u>Final</u>	<u>Gain</u>	<u>Characters Read</u>	<u>WGUs Read</u>	<u>Gain/WGU Read</u>	<u>Weeks Between Assessments</u>	<u>Gain/Week</u>
Alexander	202.01	308.20	106.19	199,408	16.62	6.39	18.57	5.72
Amber	232.31	338.32	106.01	316,732	26.39	4.02	17.29	6.13
Noah	137.95	177.31	39.36	152,322	12.69	3.10	10.14	3.88
Sophia	213.16	266.50	53.34	216,932	18.08	2.95	11.43	4.67
Bruce	96.39	131.55	35.17	165,737	13.81	2.55	14.29	2.46
Aiden	178.12	216.85	38.73	209,866	17.49	2.21	15.86	2.44
Caden	283.24	312.74	29.49	268,513	22.38	1.32	13.00	2.27
Liam	121.95	112.40	-9.56	248,639	20.72	-0.46	15.86	-0.60

Note. WGU: Weekly Goal Unit (12,000 Characters), Gain/WGU Read: Gain per 12,000 Characters Read

Table 21 indicates that Aiden began the study with an average baseline (intermediate-level) reading rate of 103.56 cpm and finished the study with an average of 161.01 cpm; a total reading rate gain of 57.45 cpm. His total reading rate gain was the second highest of all participants. Aiden also saw a baseline gain of 3.28 cpm per WGU read; the third highest of all participants. It can also be stated that his baseline reading rate improved 4.28 cpm per week.

Table 21 also shows that there was a gain in all participants' baseline reading rates over the course of the study. This ranged from a low of 19.36 cpm total gain for Liam to a 79.72 cpm total gain for Alexander. Although Alexander and Noah were at opposite ends of the intermediate-level learner spectrum on the J-CAT (intermediate-high and pre-intermediate respectively), they saw the highest ratio of cpm gains per WGU read. However, when considering real-time weeks between tests alone, Caden had the highest baseline gain per week of 6.75 cpm.

Table 22 indicates that Aiden began the study with an average intervention (elementary-level) reading rate of 178.12 cpm and finished the study with an average of 216.85 cpm; a total reading rate gain of 38.73 cpm. Aiden also saw an intervention gain of 2.21 cpm per WGU read. Furthermore, Aiden's intervention reading rate improved 2.44 cpm per week. However, Aiden's total intervention reading rate gain and intervention reading rate gain per WGU read were relatively low compared to the other participants being the fourth and third lowest respectively.

Table 22 also shows that, except for Liam, over the course of the study all participants made improvements in their intervention reading rates. These gains ranged from a 29.49 cpm total gain for Caden to a 106.19 cpm total gain for Alexander. Alexander and Noah again had some of the highest ratios of cpm gains per WGU read. However, Amber had the highest

intervention gain per week, improving 6.13 cpm per week. Liam actually saw a loss in intervention reading rate totaling -9.56 cpm.

Table 22 also seems to indicate no particular pattern of gains based on the number of characters participants read throughout the study. In other words, the data do not show higher reading rate gains for participants who read more when compared to those who read less. This finding contrasts with that of Beglar and Hunt (2014) who found a pattern indicating that students with the greatest gain in reading rate also read the most. Although no such pattern was found in the current study, this may have been due to the small number of learners that participated in the study. Further studies with larger numbers of participants may be required to further indicate if a pattern of greater reading rate gains result from higher degrees of reading.

Figure 6 illustrates Aiden's reading rate gain trendlines for both baseline and intervention phases. The figure shows trendlines, both of which have positive slopes indicating Aiden's improving reading rate trajectory over time. Figure 7 illustrates reading rate trendlines for all participants across both baseline and intervention phases. Table 23 summarizes the reading rate gains from the initial condition to final as well as the slope of the trendline of all participants' data in descending order of baseline trend. All trendlines have positive slopes showing the improving reading rate trajectory for all participants except Liam. Furthermore, most participants' trendlines show a positive gain of at least 1 cpm per reading test. However, Liam's trendline was essentially flat at 0.15.

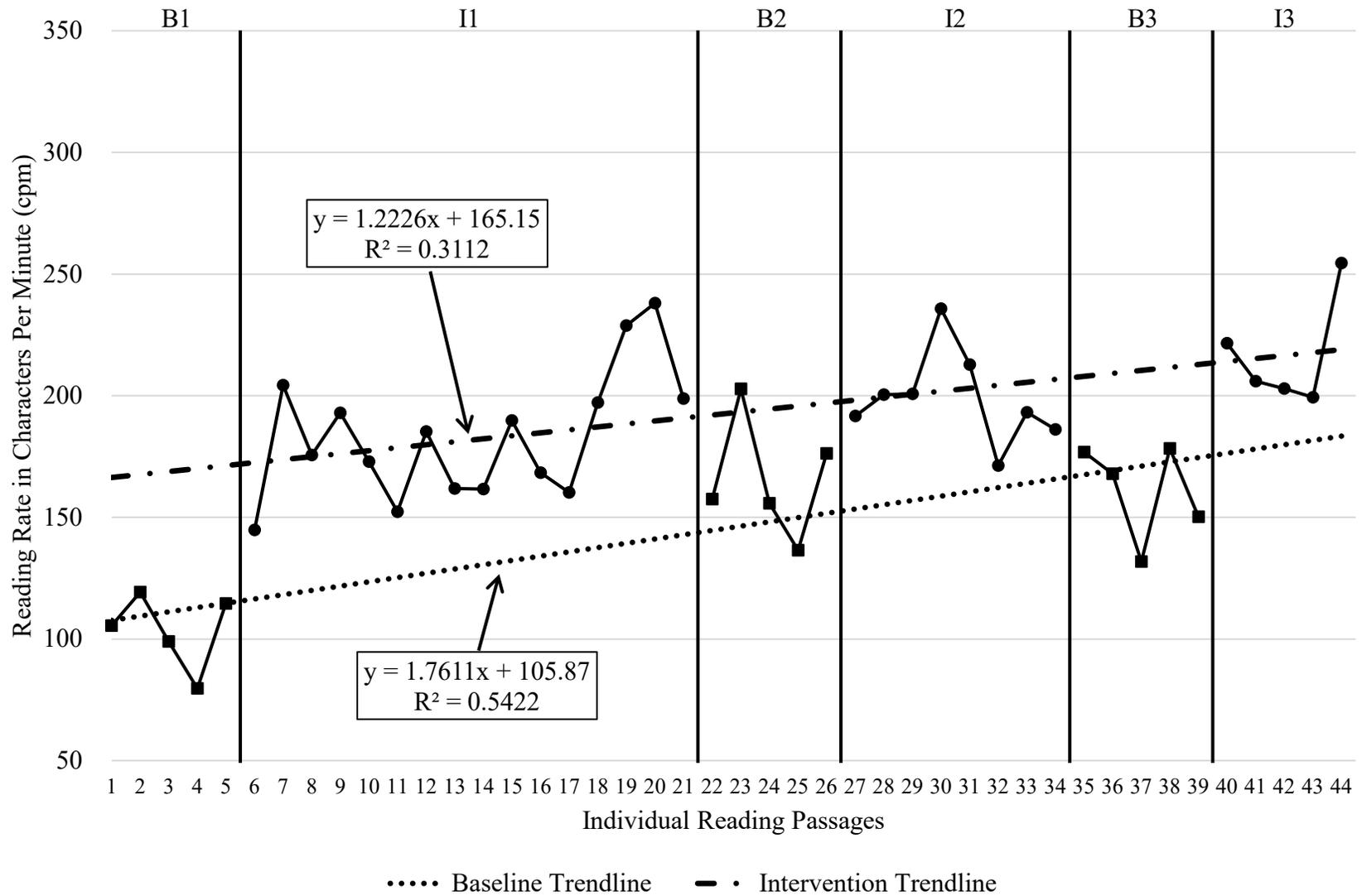


Figure 6 Trendline Graph for Aiden

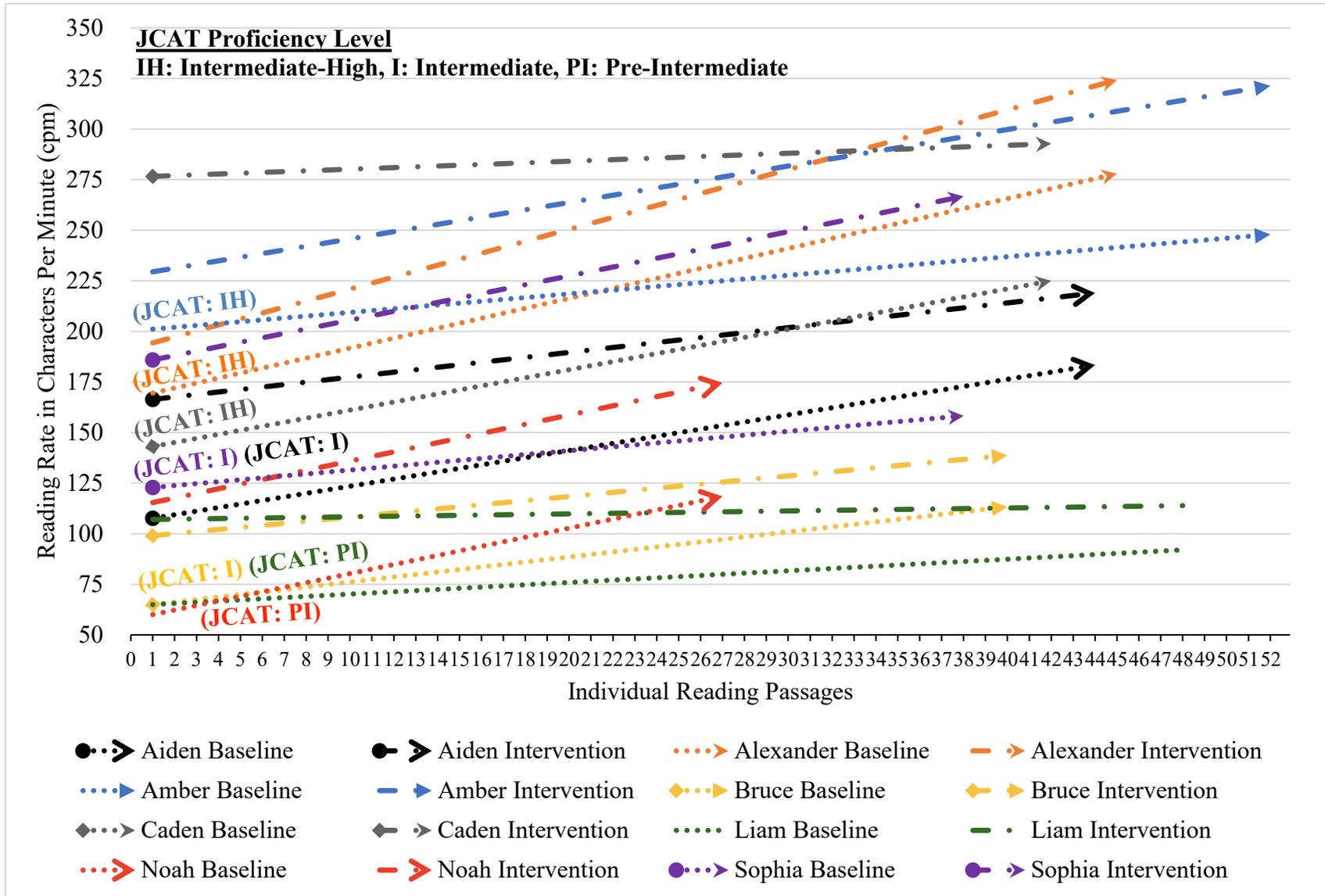


Figure 7 Trendline Graph for all Participants

Table 23 Phase Gains and Trends for all Participants

<u>Participant</u>	<u>Baseline</u> <u>Gain</u>	<u>Intervention</u> <u>Gain</u>	<u>Baseline</u> <u>Trend</u>	<u>Intervention</u> <u>Trend</u>
Alexander	79.72	106.19	2.46	2.95
Noah	43.68	39.36	2.25	2.28
Caden	53.98	29.49	2.00	0.39
Aiden	57.45	38.73	1.76	1.22
Bruce	34.71	35.17	1.24	1.02
Sophia	34.78	53.34	0.96	2.19
Amber	34.25	106.01	0.92	1.80
Liam	19.36	-9.56	0.58	0.15

The changes in participants' initial and final reading rates further suggest a causal relationship between ER and reading rates. Except for Liam's Intervention scores, descriptive statistical analyses of participants' data show that all participants' final reading rates were higher than their initial reading rates. After completing the study, participants' baseline reading rates increased an average of 44.74 cpm (26.95 standard wpm). Furthermore, intervention reading rates increased an average of 49.84 cpm (30.02 standard wpm). Finally, Figure 7 further suggest that ER led to higher reading rates over time. Specifically, Figure 7 shows that participants' reading rates increased over time with positive baseline and intervention trendlines.

Liam was the only one whose intervention reading rate actually decreased from initial reading rate to final (-9.56 cpm) when considering the initial and final five reading rate tests. During Liam's first meeting he told the researcher that as he read in Japanese, he would translate everything in his head to English. At that time the researcher encouraged him to try to break that habit. However, multiple times throughout the study he indicated to the researcher that he would often continue translating much of what he read in his head or would slow down to try to remember or memorize everything he read. There were two occasions the researcher also found

him using a dictionary during his ER, which was slowing him down. (Liam was the only participant to ever attempt to use a dictionary.) The researcher reminded him of the ER principles and told him to try to read material he would not need a dictionary for and that reading for general understanding was appropriate for ER. Furthermore, the researcher reminded him multiple times that during reading rate tests, he did not have to memorize every detail of the story. Despite the researcher's efforts, Liam continued to report that he would try to memorize minute details and reread different portions of the reading passages multiple times.

It is thought that Liam's approach to consistently translate everything into English in his head contributed to the decrease in his intervention reading rate. This result is reflective of the conclusions made by Alderson (2000) in which he states that readers fail to increase their reading rate due to a focus on individual letters and words. Moreover, Table 16 above showed a clear pattern of participants choosing to read more elementary-level passages the lower their J-CAT scores were. However, despite Liam having one of the lowest J-CAT scores, he had an uncharacteristic amount of intermediate-level reading he chose to do during the ER sessions; i.e., 19% of his ER was done using intermediate-level materials. Liam deciding to read some books that were likely above his ER level, as indicated by his desire to use a dictionary as well as his slightly higher percentage of intermediate-level reading is also thought to be one of the reasons he did not see a similar increase in his reading rates.

Of all participants, Liam spent the most time reading during ER sessions (47 hours). He also had the third highest number of characters read (248,639 characters). Despite this, he had the smallest baseline gain and a reading rate loss on intervention-level tests. This outcome suggests that regardless of how much one reads, if the reading does not adhere strictly to ER principles, it will likely not result in substantial reading rate gains.

4.2.5.1 Effect of ER on reading rate gains: Results of the ancillary *t*-tests. To bolster the results of the visual analysis above, a set of *t*-tests was also conducted. The *t*-tests compare participants' average reading rates in cpm from the beginning of the study (zero characters read for ER) with their reading rates after having read 120,000 characters (equivalent to 10 weeks) of ER. As two participants, Bruce and Noah, did not complete more than two baseline phases and two intervention phases, the test scores collected during the second baseline and intervention phases were chosen as the comparison set. The scores used for the intervention phase comparison were the average of the initial five tests taken during their respective phases.

Table 24 shows participants' average baseline and intervention reading rates and gains for the phases used in the *t*-tests. All participants' saw a gain over 10% from Baseline 1 to Baseline 2. Furthermore, with the exception of Liam, the same was true for Intervention 1 to Intervention 2. Liam's his reading rate actually decreased 13% from the beginning of Intervention 1 to the beginning of Intervention 2.

Table 24 Average Baseline and Intervention Reading Rates and Gains

	<u>Baseline</u>			<u>Intervention</u>		
	<u>1</u>	<u>2</u>	<u>Gain</u>	<u>1</u>	<u>2</u>	<u>Gain</u>
Aiden	103.56	165.76	62.20 (60%)	178.12	208.25	30.13 (17%)
Alexander	153.35	277.36	124.01 (80%)	202.01	273.59	71.58 (35%)
Amber	195.48	221.23	25.75 (13%)	232.31	266.99	34.68 (15%)
Bruce	67.44	102.16	34.72 (51%)	96.39	131.01	34.62 (36%)
Caden	136.04	201.10	65.06 (47%)	283.24	327.14	43.90 (15%)
Liam	62.55	87.30	24.75 (39%)	121.95	106.00	-15.95 (-13%)
Noah	61.81	105.49	43.68 (71%)	137.95	177.31	39.36 (29%)
Sophia	120.74	142.05	21.31 (18%)	213.16	239.21	26.05 (12%)

The following gives the descriptive and inferential data for the *t*-tests described in the previous chapter. The dependent variables considered here are the Baseline/Intervention 1 and 2

reading rates. The reading rates for Baseline 2 and Intervention 2 were taken after participants had completed 120,000 characters of ER during the initial intervention phase. Table 25-26 show the descriptive statistics summary of participants' average reading rates during the first and second baseline and intervention phases.

Table 25 Descriptive Statistics for Baseline Phases

	<u>Baseline 1</u>		<u>Baseline 2</u>	
	<u>Statistic</u>	<u>Std. Error</u>	<u>Statistic</u>	<u>Std. Error</u>
Mean	112.6213	17.08755	162.8063	23.56835
95% CI for Mean	72.2156		107.0759	
	153.0269		218.5366	
5% Trimmed Mean	110.8408		160.6369	
Median	112.15		153.905	
Variance	2335.874		4443.738	
Std. Deviation	48.33088		66.66137	
Minimum	61.81		87.3	
Maximum	195.48		277.36	
Range	133.67		190.06	
Interquartile Range	85.25		113.21	
Skewness	0.506	0.752	0.584	0.752
Kurtosis	-0.67	1.481	-0.681	1.481

Table 26 Descriptive Statistics for Intervention Phases

	<u>Intervention 1</u>		<u>Intervention 2</u>	
	<u>Statistic</u>	<u>Std. Error</u>	<u>Statistic</u>	<u>Std. Error</u>
Mean	183.1413	21.9708	216.1875	26.62148
95% CI for Mean	131.1886		153.2377	
	235.0939		279.1373	
5% Trimmed Mean	182.3997		216.145	
Median	190.065		223.73	
Variance	3861.727		5669.627	
Std. Deviation	62.1428		75.29693	
Minimum	96.39		106	
Maximum	283.24		327.14	
Range	186.85		221.14	
Interquartile Range	101.57		129.36	
Skewness	0.144	0.752	-0.141	0.752
Kurtosis	-0.716	1.481	-0.936	1.481

4.2.5.1.1 *Hypothesis test assumptions for paired samples t-tests.* In conducting the paired samples *t*-tests, all four main assumptions were met; i.e., 1) the dependent variable was continuous (ratio), 2) observations were independent of each other, 3) the data were normally distributed (see Table 27), and 4) the data contained no outliers.

Table 27 Results of Shapiro-Wilk Tests of Normality

	<u>Statistic</u>	<u>df</u>	<u>Sig.</u>
Baseline 1	0.919	8	0.422
Baseline 2	0.937	8	0.584
Intervention 1	0.977	8	0.944
Intervention 2	0.971	8	0.909

Table 28 summarizes the results of the non-directional paired samples *t*-tests for both baseline and intervention comparisons. The data show the mean difference between baseline phases as well as intervention phases. The reading rate difference between Baseline 2 (M =

162.80 cpm) and Baseline 1 (M = 112.62 cpm) was statistically significant at the .01 level, $t(7) = -4.154, p < .05$. Furthermore, the reading rate difference between Intervention 2 (M = 216.18 cpm) and Intervention 1 (M = 183.14 cpm) was also statistically significant at the .01 level, $t(7) = -3.859, p < .05$. These data indicate that on average participants' baseline and intervention reading rates improved significantly after reading 120,000 characters while following ER principles.

Table 28 Results of Paired Samples *t*-Tests

	<u>Mean</u>	<u>SD</u>	<u>Std. Error</u> <u>Mean</u>	<u>95% CI of Difference</u>		<u>t</u>	<u>df</u>	<u>Sig.</u> <u>(2-tailed)</u>
				<u>Lower</u>	<u>Upper</u>			
B1 - B2	-50.185	34.174	12.08232	-78.75514	-21.61486	-4.154	7	0.004
I1 - I2	-33.046	24.218	8.56253	-53.29342	-12.79908	-3.859	7	0.006

These inferential statistical analyses further support the findings of the visual analysis discussed above. In comparing the first and second phases of the baseline and intervention conditions, results of the paired *t*-tests show that Baseline 2 reading rates were significantly higher than Baseline 1 reading rates, with a mean difference of 50.19 cpm (30.23 standard wpm). The results of the paired *t*-tests further show that Intervention 2 reading rates were also significantly higher than Intervention 1 reading rates, with a mean difference of 33.05 cpm (19.90 standard wpm). These results indicate that participants' reading rates improved significantly after completing 120,000 characters of ER. Taking into account the degree of control the researcher had over the variables in this study, and as ER was the only Japanese related activity five of the eight participants in the current study were engaged in throughout the course of the project, the visual and statistical analyses suggest that ER will likely lead to higher reading rates in intermediate JFL learners.

Results of this study are similar to almost all previous studies conducted on reading rate gains as a result of ER. Most of the studies shown in Table 1 of Chapter 2 found statistically significant increases in learner reading rates following the implementation of an ER program. For example, Beglar et al. (2012) and Beglar and Hunt (2014) found reading rates of participants who engaged in ER increased significantly over time. Furthermore, Beglar and Hunt (2014) found that those who read the most had reading rate gains between 19-32 wpm. The current study further bolsters the results of previous studies, specifically those of Beglar et al. and Beglar and Hunt, showing very similar findings to theirs with reading rate gains of around 19-30 wpm, however in a much shorter time period.

Moreover, results of the present study further bolster conclusions made by Carver (2000) and Yamashita (2015) concerning the interplay of easy reading materials and reading rate. The reading material used as reading rate tests during intervention tests in the current study were set at an elementary-level reading difficulty, while baseline tests were set to meet participants' current reading level (i.e., intermediate-level difficulty). The results of the visual analysis suggest a consistent and immediate difference in participants' reading rates when moving from one phase to the next, with faster reading rates while reading lower difficulty passages. These results reflect Carver and Yamashita's conclusions that a relationship exists between the difficulty level of a text and the speed at which one can read and that a text's level of difficulty has a substantial effect on learners' reading processes.

4.3 Research Question 3

RQ3. Are learners who engage in ER able to maintain a high-level of comprehension as their reading rates increase?

This section provides data on participants' comprehension of baseline and intervention tests throughout the study.

4.3.1 Proportion of agreement between test raters. Participant comprehension was determined as described in the previous chapter. The proportion of overall agreement between the two main raters was found to be .91. For the small percentage of ratings that the two main raters did not match, a third rater graded participants' passage discussion recordings, producing 100% rating agreement for each test from at least two raters.

4.3.2 Participants' scores. To answer RQ3, a "high-level of comprehension" will be operationalized as scores of 4 to 5 on the reading comprehension grading rubric. The average comprehension score for all 336 baseline and intervention reading tests completed by participants was found to be 4.28. This suggests that throughout the study participants were able to maintain a high-level of comprehension. A detailed list of participants' tests and comprehension scores is located in Appendix F. Table 29 below summarizes participants' average comprehension score for each phase of the study.

Table 29 Participants' Average Comprehension Scores in Each Phase

	<u>B1</u>	<u>I1</u>	<u>B2</u>	<u>I2</u>	<u>B3</u>	<u>I3</u>	<u>B4</u>	<u>I4</u>
Aiden	4.0	4.7	4.2	4.8	4.4	5.0	-	-
Alexander	4.4	4.6	3.8	4.3	4.0	4.6	-	-
Amber	4.8	5.0	4.4	5.0	4.8	5.0	4.6	5.0
Bruce	2.8	4.4	3.4	4.7	-	-	-	-
Caden	3.2	4.8	4.4	4.7	4.4	4.6	-	-
Liam	2.6	4.4	3.4	4.6	4.2	4.8	-	-
Noah	1.0	4.6	2.8	4.6	-	-	-	-
Sophia	2.6	4.4	4.0	4.2	4.6	4.6	-	-

Table 29 shows that Aiden's comprehension was consistently high throughout each phase of the study. Specifically, Aiden's lowest phase average was a comprehension score of 4.0. Aiden's comprehension scores also increased within similar conditions. In other words, the average of Aiden's B3 scores was higher than B2 and B1. Furthermore, the average of his I3 scores was higher than his I2 and I1 scores.

A similar pattern was found for the other participants as well. This pattern was particularly clear for Bruce, Liam, and Noah. Although Bruce and Noah's baseline scores were low, there was an increase over time. The average of Bruce's baseline scores increased from 2.8 in B1 to 3.4 in B2. His intervention score average also increased from 4.4 to 4.7. Noah also saw an increase from 1.0 in B1 to 2.8 in B2, with his intervention scores remaining constant. Liam's B1 and B2 averages were also low, however they did increase and reached a high-level of 4.2 in B3. Liam's average intervention comprehension scores also increased over time from 4.4 in I1, to 4.8 in I3. Sophia's scores also showed a similar pattern of improvement, however with a .2 decrease in average scores in I2. Amber and Caden's average scores remained high and fairly consistent throughout the study. Specifically, Amber's comprehension scores throughout the study averaged between 4.4-5.0. However, Caden did have a low average of 3.2 in his initial

baseline phase. Although Alexander had high-level average scores throughout all but one phase, he did see a slight decrease in average comprehension scores during baseline phases from the beginning to the end of the study.

Throughout the study, all participants were able to maintain a high-level of comprehension during intervention phases. Furthermore, the data show a pattern of increasing comprehension scores over time for both baseline and intervention phases. These results suggest that an increase in reading rates had no negative effect on participants' comprehension scores and in fact the ER treatment likely helped participants improve their reading comprehension abilities. Finally, these results indicate that participants were not only getting through the reading tests faster, but were also comprehending what they were reading, and thus suggests the ER treatment was a main factor in increasing participants' reading fluency.

These findings are similar to those of previous research. The results are similar to the enhanced comprehension of the participant in Leung (2002). Furthermore, as comprehension in Leung's study was conducted subjectively, the approach used in the current study and the outcome of these comprehension tests further bolster her findings. Moreover, this study's findings also further strengthen the results of Beglar, Hunt, and Kite (2012), Lake (2014), Huffman (2014), and McLean and Rouault (2017) who also found that ER participants' reading rates improved significantly while maintaining high-levels of comprehension.

4.4 Research Question 4

RQ4. Is reading 12,000 characters (7,200 standard words) each week a feasible goal for intermediate-level JFL learners engaged in ER?

This section provides data collected on the number of characters read by each participant each week during the study and will be used to address Research Question 4. Research Question 4 is a key question to ask in determining if Beglar and Hunt's (2014) assertion that a goal of 7,200 standard words per week should be set to achieve adequate reading rate gains. In the current study everything participants' chose to read for ER was meticulously documented and the number of characters and words read by each participant were carefully calculated using the morphological analysis tools built into the author's Reading Fluency Solutions web application.

At the beginning of the study each participant set a goal of reading 12,000 characters per week. Throughout the study participants met with the researcher for approximately one hour, two to three times a week. This is similar to meeting with students enrolled in a three-credit hour course in American universities. Although university courses often have students complete assignments outside of class, the participants in the current study did not complete ER activities outside of the study. Table 30 summarizes the number of characters participants read during each week of their participation as well as the amount of time they spent reading (formatted hours:minutes or h:mm). The time shown in Table 30 is the time participants actually spent reading and does not include time spent looking for books to read, changing books, taking tests, or speaking with the researcher.

The records kept of participants' ER indicate that the average number of characters read by participants each week was 15,126 (9,112 standard words). The highest average was from Caden at 19,180 characters read. The lowest average was from Bruce at 11, 838, only 162

characters below the 12,000-character goal. Over the course of the study Aiden read an average of 12,345 characters per week in an average of one hour and 29 minutes. Other participants had similar results with Alexander, Caden, Noah, and Sophia also reading for an approximate average of one hour and 30 minutes per week. These four also completed over 12,000 characters of ER per week on average.

Amber and Bruce read closer to an average of two hours a week. Amber completed an average of 18,631 characters of ER per week and Bruce approached an average of 12,000 characters per week. Finally, the amount of time Liam spent per week on average conducting ER was the highest at two hours and 45 minutes. Liam also read an average of 14,626 characters per week.

It was also found that the slowest reading pace during any one week was 65 cpm for Liam's second week. Had he read up to 12,000 characters it would have taken him a total of three hours to complete. The next slowest pace was during Bruce's first week at 78 cpm. Had Bruce completed 12,000 characters of ER that week it would have taken him two hours and 30 minutes. Aiden's slowest pace was during his first week at 95 cpm in which it would have taken him two hours to read 12,000 characters.

Table 30 Participants' Weekly Reading

Week	Aiden		Alexander		Amber		Bruce		Caden		Liam		Noah		Sophia	
	Characters	Time														
1	4,453	0:46	9,682	1:30	23,687	2:10	5,703	1:13	7,854	0:37	4,713	0:59	9,384	1:28	19,231	1:44
2	19,292	2:34	19,356	2:10	26,687	2:24	12,184	1:59	28,189	2:15	10,996	2:50	17,355	2:13	27,153	2:23
3	15,812	1:58	5,180	0:47	25,537	2:31	14,141	2:08	24,116	2:06	18,407	3:29	20,550	2:18	14,529	1:18
4	18,406	2:07	-	-	20,026	2:10	12,796	1:53	27,239	1:59	24,723	4:28	23,670	2:35	22,231	2:07
5	10,723	1:01	-	-	22,368	2:29	12,562	2:02	23,942	1:37	21,966	4:20	7,892	0:45	14,976	1:14
6	17,515	2:08	18,287	2:38	16,386	1:35	14,138	2:07	21,525	1:55	13,212	2:34	11,425	1:14	23,841	2:05
7	11,474	1:15	15,051	1:54	28,660	2:46	13,147	1:58	27,877	2:02	21,347	3:38	14,440	1:39	15,474	1:29
8	15,884	1:55	19,908	2:19	17,788	2:00	15,767	2:27	19,864	1:23	7,418	1:13	15,334	1:30	12,279	1:14
9	6,479	0:42	24,949	2:22	13,331	1:30	-	-	14,075	1:14	14,658	2:46	6,835	0:44	23,071	1:44
10	17,309	2:00	9,145	0:38	6,887	0:43	13,900	2:13	5,149	0:28	19,749	3:47	6,059	0:40	7,229	0:37
11	17,941	2:01	15,016	1:53	8,619	1:02	7,137	1:08	17,756	1:34	13,582	2:14	19,378	1:54	13,840	1:18
12	7,484	1:01	4,173	0:32	15,895	1:46	6,944	1:13	11,562	1:02	9,298	1:43	-	-	23,078	2:00
13	11,684	1:50	10,221	1:16	14,269	1:43	16,190	2:25	18,878	1:36	20,606	3:35	-	-	-	-
14	5,524	0:41	11,222	1:22	22,202	2:30	9,690	1:48	20,487	1:42	15,506	2:50	-	-	-	-
15	10,128	0:57	13,741	1:33	20,794	2:28	11,438	1:47	-	-	8,330	1:33	-	-	-	-
16	9,828	1:17	7,364	0:52	-	-	-	-	-	-	18,755	3:45	-	-	-	-
17	9,930	0:53	-	-	19,465	2:01	-	-	-	-	5,373	1:01	-	-	-	-
18	-	-	10,354	1:05	14,131	1:33	-	-	-	-	-	-	-	-	-	-
19	-	-	5,759	0:29	-	-	-	-	-	-	-	-	-	-	-	-
Total	209,866	25:16	199,408	23:28	316,732	33:30	165,737	26:26	268,513	21:37	248,639	46:52	152,322	17:06	216,932	19:17
Average	12,345	1:29	12,463	1:28	18,631	1:58	11,838	1:53	19,180	1:32	14,626	2:45	13,847	1:33	18,078	1:36

All participants in the current study read between one and a half to two hours to achieve their individual averages at or above the 12,000-character mark. These data suggest that given approximately two hours to read each week, a weekly goal of 12,000 characters (or 7,200 standard words) is feasible for intermediate-level JFL learners.

4.5 Research Question 5

RQ5. What are intermediate-level JFL learners' attitudes towards ER?

This section will address how participants answered questions in the pre- and post-study questionnaires. Participants were also asked follow-up open-ended questions regarding their responses to portions of the Post-study Questionnaire.

4.5.1 Pre-study Questionnaire. The following are the Likert Scale questions posed in the Pre-study Questionnaire.

1. Most of what I read in Japanese is easy reading material.
2. I know where to find a variety of Japanese reading material on a wide range of topics.
3. Most of what I read in Japanese is what I personally choose to read.
4. I read in Japanese as much as possible.
5. When I read in Japanese I most often read for pleasure.
6. When I read in Japanese I most often read for general understanding (to get the gist of the text).
7. I find reading in Japanese to be a reward in itself.
8. My reading speed in Japanese is usually faster rather than slower.
9. My Japanese reading is most often done individually and silently.
10. I have time and am able to read 2,400 characters (about 3 single-spaced pages) of Japanese each weekday.

These questions were asked to ascertain what degree participants' Japanese reading prior to beginning the study aligned with the principles of ER. All participants completed this survey after discussing the rules and principles of ER with the researcher. Table 31 summarizes the number of responses for each Likert Scale option on each question.

Table 31 Number of Responses to Pre-study Questionnaire Questions

	<u>Strongly agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly disagree</u>
Q1	2	2	2	1	1
Q2	1	2	1	2	2
Q3	4	2	0	2	0
Q4	0	2	1	3	2
Q5	1	2	2	3	0
Q6	2	4	0	2	0
Q7	1	4	2	0	1
Q8	0	1	2	3	2
Q9	2	4	2	0	0
Q10	4	2	1	1	0

The data in Table 31 show that prior to beginning the study 53% of participants' responses to the Likert Scale statements were agree or strongly agree. The data also show that 16% of responses were neutral and 31% were disagree or strongly disagree. No participant disagreed with Question 9 and only 1 participant disagreed with Questions 7, 10, and 11.

4.5.2 Post-study Questionnaire. In the Post-study Questionnaire participants were asked if the ER they completed during the study was their first experience with ER. To this question all participants answered in the affirmative. They were also asked to answer the same Likert Scale questions that were posed in the Pre-study Questionnaire while considering their reading having then completed the study. Furthermore, as this was participants' first experience with ER, part of the Post-study Questionnaire asked participants to reflect on their approach to reading in Japanese prior to beginning the study. Following these questions, they were also asked a series of new questions regarding the ER they completed as part of the study. Table 32 summarizes the number of responses for each Likert Scale option on the Post-study Questionnaire.

Table 32 Number of Responses to Post-Study Questionnaire Questions 1-10

	<u>Strongly agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly disagree</u>
Q1	1	3	3	1	0
Q2	2	4	1	1	0
Q3	5	3	0	0	0
Q4	1	5	0	1	1
Q5	4	2	1	1	0
Q6	3	5	0	0	0
Q7	5	2	1	0	0
Q8	1	7	0	0	0
Q9	4	4	0	0	0
Q10	4	2	1	0	1

The data in Table 32 indicate that at the completion of the study 84% of participants' responses to the Likert Scale statements were agree or strongly agree. The data also show that 9% of responses were neutral and 8% were disagree or strongly disagree. No participant disagreed with Questions 3, 6-9. Two participants disagreed with Question 4 and only 1 participant disagreed with Questions 1, 2, 5, and 10.

After completion of the study, participants also reflected on how they thought they read prior to beginning their ER experience. Table 33 summarizes participants responses to Questions 11-20 on the Post-study Questionnaire. This reflection data shows that 34% of responses were agree or strongly agree, 31% were neutral, and 35% were disagree or strongly disagree.

Table 33 Number of Responses to Post-Study Questionnaire Questions 11-20

	<u>Strongly agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly disagree</u>
Q11	0	2	2	3	1
Q12	0	0	4	2	2
Q13	1	2	2	1	2
Q14	0	0	3	3	2
Q15	2	0	3	2	1
Q16	1	4	3	0	0
Q17	2	4	1	1	0
Q18	0	1	2	4	1
Q19	1	4	2	0	1
Q20	1	2	3	2	0

These results indicate that after having engaged in ER for multiple months, participants' responses to the reflection questions on the Post-study Questionnaire (Questions 11-20 shown in Table 33) were considerably different from their initial answers to the same Likert Scale questions posed in the Pre-study Questionnaire. Specifically, responses on the Pre-study Questionnaire seemed to suggest that participants were mostly already following ER principles in their reading at home or in school with 53% of responses agreeing with the questionnaire's statements. However, when reflecting on their approach to reading prior to joining the study, participants' responses changed showing only 34% of responses agreeing with the same statements. This difference seems to suggest that even after having the ER principles explained to them prior to completing the Pre-study Questionnaire, participants were still not fully aware of how the principles applied to their own reading habits. In fact, the difference in their responses seems to further suggest that the ER experience itself was necessary for them to understand how different ER is from traditional reading (e.g., intensive reading [IR]) conducted in typical Japanese courses. Thus, it is thought that the combination of ER along with a constant reminder

of ER principles (see Appendix B) was necessary for participants to accurately assess how closely their pre-study reading habits aligned with ER principles.

Having established that participants' responses to Questions 11-20 on the Post-study Questionnaire are likely a more accurate assessment of the degree to which participants' Japanese reading prior to beginning the study aligned with ER principles, these responses will be used to discuss changes in participants' reading approach after having completed the study. Specifically, participants responses to Questions 11-20 on the Post-study Questionnaire show that their pre-study reading did not follow closely with ER principles in general. No participant agreed with Questions 12 and 14, and only one agreed with Question 18. This shows that prior to joining the study participants did not know where to find a variety of Japanese reading material on a wide range of topics, they did not read in Japanese as much as possible, and they usually read slower rather than faster in Japanese. However, most participants reported their pre-study reading was most often for general understanding, that they found Japanese to be a reward in itself, and that their Japanese reading was most often done individually and silently. Responses to the remaining questions posed to participants were mixed.

In comparison, participants indicated that after having completed the study their approach to reading followed much closer to ER principles. Specifically, while only 34% of responses to the reflection questions on the Post-study Questionnaire, 84% of responses to Questions 1-10 on the same questionnaire were in the affirmative (agree or strongly agree). This suggests that participants were following ER principles much more closely after engaging in the study than prior to participation.

The following are the Likert Scale questions (21-40) posed in the Post-study

Questionnaire.

21. I like extensive reading.
22. I like the calm setting of an extensive reading session.
23. I like that extensive reading allows me to choose my own reading materials.
24. Extensive reading was helpful in studying/learning Japanese.
25. I would like to continue extensive reading in the future.
26. I am convinced that I will definitely read more in the future.
27. I believe that more learners should be given the chance to experience extensive reading.

During extensive reading I

28. can concentrate/focus better.
29. find that I have more time to figure out words.
30. find that I recognize more words.
31. understand better what I am reading.
32. need less help than I used to.
33. feel that I can read better.
34. feel more comfortable because no one is listening to my reading.
35. feel more confident because no one is listening to my reading.
36. generally feel more relaxed.
37. do **NOT** feel that reading is difficult.
38. do **NOT** feel pressured/stressed out.
39. find that reading is enjoyable.
40. feel motivated to read more.

These questions were asked to further explore participants' experiences with ER. All participants completed this survey at the end of the study. Table 34 summarizes the number of responses for each Likert Scale option on Questions 21-40. Responses to Questions 21-40 show an overwhelming consensus among participants with 61% of responses being strongly agree and 28% being agree. Furthermore, nine percent of responses were neutral and just two percent were disagree or strongly disagree. Only one participant disagreed with Questions 26, 34, and 35.

Table 34 Number of Responses to Post-Study Questionnaire Questions 21-40

	<u>Strongly agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly disagree</u>
Q21	6	2	0	0	0
Q22	7	1	0	0	0
Q23	6	1	1	0	0
Q24	5	3	0	0	0
Q25	7	0	1	0	0
Q26	6	1	0	1	0
Q27	8	0	0	0	0
Q28	3	4	1	0	0
Q29	3	3	2	0	0
Q30	5	2	1	0	0
Q31	5	3	0	0	0
Q32	3	3	2	0	0
Q33	6	2	0	0	0
Q34	2	4	1	0	1
Q35	2	4	1	0	1
Q36	5	1	2	0	0
Q37	4	2	2	0	0
Q38	4	3	1	0	0
Q39	5	3	0	0	0
Q40	5	3	0	0	0

Responses to Questions 21-40 on the post-study questionnaire show participants' positive perceptions of ER. Specifically, participants indicated that they agree that there are many benefits that come from ER. This was documented by the overwhelming 89% of positive responses (strongly agree or agree) to Questions 21-40. Participants felt particularly strongly about Question 27, in which all strongly agreed that more learners should be given the chance to experience ER. Responses to Questions 22 and 25 further indicate participants' strong resolve to continue ER after completion of the study as well as the high degree to which they enjoyed the calm setting of the ER sessions. Furthermore, all participants reported liking ER, and felt ER was helpful in studying/learning Japanese. Results also suggest that ER helped all participants better

understand what they were reading, made them feel like they could read better, and helped them find joy and motivation in reading. Tables 35-38 further suggest participants had positive attitudes towards ER, felt that ER was enjoyable, helped motivate them, and helped increase their reading abilities.

Table 35 Increased Enjoyment from ER (Questions 21-23, 39)

<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>
97%	3%	0%

Table 36 Increased Motivation from ER (Questions 25-27, 40)

<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>
94%	3%	3%

Table 37 Increased Reading Ability from ER (Questions 29-33)

<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>
88%	12%	0%

Table 38 Positive Attitude Toward ER (Questions 24, 28, 34-38)

<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>
82%	14%	4%

Some themes emerged when analyzing participants' responses to the open-ended questions posed in the Post-study Questionnaire. These themes included 1) ER's effect on lowering one's affective filter; 2) the benefits from a set time to engage in ER; 3) the contrast between ER and previous reading methods (e.g., IR); and 4) the need for level-appropriate reading materials. For example, Alexander said the following in response to being asked "What made extensive reading an enjoyable experience for you?"

It was relaxing to just read. I'm not sure it had anything to do with it being in Japanese per se, but having a time set apart to just focus on reading in a quiet place was relaxing. I also was never given the opportunity to read like this in Japanese [before], so it showed me what I can do, more than anything.

This quote from Alexander suggests that ER helped lower his affective filter, helping him be relaxed while also providing a contrast with what he had previously experienced in his studies of Japanese. He also comments that having a set time to engage in ER made the experience enjoyable. Other participants had similar comments. Sophia noted that not being asked questions about the material made the experience enjoyable. Amber and Bruce also felt that being able to read easy books that were at their level helped them enjoy ER. Bruce also commented on the contrast between ER and other reading methods stating: "It showed me another way to study that I wasn't familiar with before this study." Others also commented that the availability of materials and being able to choose what to read also made the experience enjoyable. These comments made by participants suggest that ER may lead to a lower affective filter and thus a more enjoyable experience when compared with more intensive style reading methods.

When asked "What made extensive reading a helpful learning experience for you?" five of the eight participants noted that seeing unknown words in context was helpful. Bruce repeated his previous comments suggesting that it was helpful to be able to read books that were at his level. He responded saying: "I feel like I could catch on to simple things I didn't know or had never been taught because a majority of the text was familiar." Also, in response to this question, Alexander stated that the confidence he received from engaging in ER helped him learn. Finally, Caden commented that the lower affective filter ER provides, and the contrast ER has with other reading methods made ER a helpful learning experience for him. Specifically, Caden reported the following.

[ER] gave me a lot of input and practice, but it was practice that was enjoyable and didn't feel forced. (In my Japanese classes, I was exposed to more intermediate level texts . . . but I felt that my comprehension and confidence were increasing as I [participated in this research] study).

These comments suggest that one of the biggest factors that participants felt helped them learn was the context provided by reading level-appropriate texts.

There were a larger variety of responses to the question “Why do you believe more learners should be given the chance to experience extensive reading?” Some stated generally they felt they benefited from ER and thought others could benefit also, while a few others stated their feeling that reading large quantities of passages was a good experience that others could also have. Alexander stated that it can help others read beyond “academic” material and Sophia commented on how ER builds one’s confidence by showing the reader that they can read more than they think they can. Amber echoed this comment in the following statement.

I feel like [ER] built my confidence that I could read things meant for native readers, even though it meant working my way up from very low levels of difficulty. Having had difficulty prior to this study with a light novel meant for preteens, I wouldn't have thought I could have read as much of "Madogiwa no Totto-chan" as I did, until I got to a level close to it and [the researcher] told me that I should be able to read it given the [number] of unknown words allowed per page [and still be able to understand 98% of the text].

In the following comment, Bruce further explained his thoughts on how ER contrasts with traditional methods (e.g., IR) and how ER was enjoyable, helpful, and may benefit others.

Yes, I think that [ER] would show that language learning can happen in a variety of ways without the intense pressure of a classroom setting. It also showed me that language learning can be fun. I don't look back on my university language classes with enjoyment. If I had this type of learning class I may have enjoyed my experience more.

In general, these comments further reflect the voice of participants in their unanimous selection of “strongly agree” to the statement “I believe that more learners should be given the chance to experience extensive reading.”

In response to the question “What about extensive reading helped you concentrate/focus better?” two participants mentioned having a set time for ER helped them focus. Four others commented that being able to read in a quiet environment was helpful. Amber also commented that not being required to read out loud and avoiding possible judgement by peers or an instructor helped her focus. Bruce and Noah also reported being able to read at their own pace and choosing what they read was helpful. These statements from participants further show the desire of language learners to have set times for individual, silent reading that is not constantly being assessed for accuracy.

Finally, participants also responded to the open-ended question “How did extensive reading make you feel motivated to read more?” Many participants’ responses indicated that ER’s effect on lowering one’s affective filter as well as the level-appropriate material made them feel motivated. Amber mentioned that she now felt less guilt from reading “lower-level” material and that she felt more confident reading at her level. Bruce and Caden echoed this sentiment stating ER gave them confidence. Bruce elaborated on this stating “[ER] showed me that I could like reading if I read at my level.” These responses further suggest learners need level-appropriate reading materials to boost their confidence and thus their motivation to read.

These results are similar to those found by Lin et al. (2012). In assessing EFL students’ perceptions of a Sustained Silent Reading program with aspects similar to ER, Lin et al. found a large majority of participants agreed with the statements posed in the Post-study Questionnaire. Specifically, 76% or more of responses to the questions posed in their study were positive, i.e., strongly agree or agree. Similarly, Tables 35-38 show that a large majority (82% or more) of responses to the same statements were also in agreement. These results further bolster the findings of Lin et al. and further show the positive attitudes participants have towards programs

that allow them to choose what they want to read and allow them to read individually and silently.

Many participants in this study noted an increase in confidence that came from engaging in ER. Nishino (2007) also found confidence to be a theme in participants' discussions with her stating that confidence seemed to influence fluctuations in her two participants' L2 reading motivation. Factors influencing the JFL learners in de Burgh-Hirabe and Feryok (2013) were also similar to those found in the current study. Specifically, de Burgh-Hirabe and Feryok stated that ER books and autonomy (e.g., being free to choose books) were two main factors that affect learner attitudes towards ER. Similarly, level-appropriate books as well as the ability to choose what to read were factors learners in the current study stated had made ER a motivating experience.

4.6 Chapter 4 Summary

This chapter has presented a discussion of the results of the current study with a major focus on one participant, Aiden. Initially, this chapter showed that participants began the study with relatively low baseline reading rates. The data also showed that Aiden's data differed between similar phases, with consistently higher reading rates during the final phases. Similar results were also found in the other participants' data.

It was found that participants began the study with an average baseline reading rate of 112.62 cpm. This increased to an average of 157.36 cpm over participants' final baseline tests. Participants' average intervention reading rates also increased from 183.14 cpm during the initial intervention tests to an average of 232.98 cpm during participants' final intervention tests. Data showed that Aiden's baseline reading rate increased by 57.45 cpm over the course of the study.

Aiden's intervention reading rate also increased by 38.73 cpm. All other participants' baseline reading rates also increased from the outset to conclusion. Furthermore, except for Liam, all participants made improvements in their intervention reading rates as well. Moreover, participants' baseline and intervention reading rate trendlines all showed a positive gain over time. Moreover, ancillary inferential statistical analyses also showed a statistically significant improvement in reading rates from B1 to B2 as well as from I1 to I2. These results suggest that engaging in ER will likely lead to reading rate gains in intermediate-level JFL learners.

This chapter also presented data on the comprehension levels maintained by participants throughout the study. The average of all tests completed by participants in the study was 4.28. Aiden's tests showed that he was consistently able to comprehend the never-before seen passages presented to him as baseline and intervention tests. Although some participants had lower scores during the initial baseline phase, a pattern of increasing scores was found as participants continued through study. These results suggest that learners who engage in ER are likely able to maintain a high-level of comprehension as their reading rates increase.

This chapter also discussed the feasibility of a 12,000-character-per-week reading goal. Aiden was able to achieve this goal in an average of one hour and 30 minutes each week. Most all other participants also were able to achieve this goal. Furthermore, most were able to read more than 12,000 characters per week within one to two hours of reading per week. These results suggest that reading 12,000 characters (7,200 standard words) each week is likely a feasible goal for intermediate-level JFL learners engaged in ER.

Finally, this chapter presented the data on how participants perceive the ER treatment. The data showed a mixed reaction to the principles of ER at the outset of the study. However, in responding to the post-study questionnaire, most responded positively indicating that they were

following the principles of ER more after having participated. Furthermore, in answering questions such as “I like extensive reading”, which explore participants’ experience with ER in more depth, 89% of responses were in the affirmative (i.e., Strongly Agree or Agree). Moreover, in response to the Post-study Questionnaire open-ended questions, multiple themes were found including 1) ER’s effect on lowering one’s affective filter; 2) the benefits from a set time to engage in ER; 3) the contrast between ER and previous reading methods (IR); and 4) the need for level-appropriate reading materials. These results suggest that overall, intermediate-level JFL learners will likely respond positively to ER.

CHAPTER 5. CONCLUSION

5.1 Overview

This chapter will provide final remarks on this doctoral dissertation. Specifically, this chapter presents a summary of findings, discusses the pedagogical implications of the study's findings, and provides recommendations based on those results. Furthermore, limitations of the current study are presented along with suggestions for future research.

5.2 Summary of Findings

This study has attempted to answer the following key questions. 1) What is the average reading rate of intermediate-level JFL learners prior to and following engagement in ER? 2) Will ER lead to reading rate gains in intermediate-level JFL learners? 3) Are learners who engage in ER able to maintain a high-level of comprehension as their reading rates increase? 4) Is reading 12,000 characters (7,200 standard words) each week a feasible goal for intermediate-level JFL learners engaged in ER? 5) What are intermediate-level JFL learners' attitudes towards ER?

Results of this study suggest that intermediate-level learners of Japanese as a foreign language (JFL) with no prior experience with extensive reading (ER) likely have relatively low reading rates and room for improvement. The results further indicate that following an ER treatment, these learners reading rates will likely improve. Specifically, the researcher found that participants began the study with an average elementary-level reading rate of 183 cpm (110 standard wpm) and finished with an average of 233 cpm (140 standard wpm). It was also found that participants' intermediate-level reading rates averaged 113 cpm (68 standard wpm) at the outset and 157 cpm (95 standard wpm) at completion.

Furthermore, results show that after two and a half to four months of ER following strict adherence to ER principles, intermediate-level JFL learners' reading rates are likely to significantly improve. Evidence of participants' reading rate gains in the current study was demonstrated through visual analysis of participants' data as well as ancillary statistical analyses. This adds support for what has been found previously. However, results of the current study did not show a pattern of greater reading rate gains for those who read a larger number of characters. Moreover, the results of the current study further suggest that reading at length alone without strictly following ER principles may not lead to considerable reading rate gains. Liam's case, in which a relatively small baseline gain and a negative intervention gain was documented, is evidence of this finding.

This study also examined the comprehension levels of participants as their reading rates increased. Results of the current study show that increasing reading rates likely has little, if any negative effect on intermediate-level JFL learners' comprehension abilities. On the contrary, results suggest that ER will likely help learners improve their reading comprehension as their reading rates increase. This is similar to the results of previous studies.

The present study also considered what would be a feasible reading goal for intermediate JFL learners. Results indicate that a reading goal of 12,000 characters (7,200 standard words) per week is likely a feasible goal. Intermediate-level JFL learners are likely to be able to complete 12,000 characters of ER by reading approximately 18-24 minutes per weekday or an hour and a half to two hours per week on average. Specifically, all participants in the current study read between one and a half to two hours each week to achieve their individual averages at or above the 12,000-character mark.

Regarding intermediate-level JFL learners' approach towards ER, results indicate that learners with no prior ER experience likely do not follow ER principles prior to engaging in ER. Furthermore, results suggest that even after having ER principles explained to them, learners may not be able to immediately assess their own reading approach without actually experiencing ER. Furthermore, results of the current study do show that after experiencing ER, learners are likely to become more aware of their approach to reading and follow ER principles more closely.

Results of the present study also indicate that intermediate-level JFL learners have overwhelmingly positive attitudes towards ER. Specifically, results suggest that learners who engage in ER are likely to enjoy the ER activity, are likely to become more motivated to read, are likely to feel their reading abilities increase, and likely to have more positive attitudes towards ER in general. Finally, participants' responses to open-ended questions displayed four main themes. Specifically, participants discussed 1) ER's effect on lowering one's affective filter; 2) the benefits that come from a set time to engage in ER; 3) the contrast between ER and previous reading methods (e.g., intensive reading [IR]); and 4) the need for level-appropriate reading materials.

5.3 Limitations and Future Research

Participants in the present study were required to meet with the researcher for two to three one-hour ER sessions per week and were not allowed to conduct ER on their own outside of these sessions. Due to the time-intense nature of the current study, the researcher's ability to procure a vast number of participants was limited. However, single-case design (SCD) experts suggest that studies including at least three participants are able to demonstrate an effect. Thus, with eight participants with similar results among them, the current study was able to

demonstrate the effects of ER on the reading rates of intermediate-level JFL learners.

Nevertheless, the current study was limited in the type of learners who participated. Specifically, participants were all native English speakers with somewhat similar backgrounds. Furthermore, the majority of participants were non-traditional learners; i.e., five of the eight participants had experience learning Japanese as missionaries for The Church of Jesus Christ of Latter-day Saints. Furthermore, as participants self-enrolled in the current study, the author was unable to conduct random sampling as part of this study. This may have also led to a self-selection bias or an implementation threat, including participants who may have had a higher level of motivation than the overall population of JFL learners. This is a factor for which it is difficult to control.

This study was also limited in its method for determining a causal relationship. Specifically, because ER requires learners to read copious amounts of level-appropriate reading material over an extended period of time, it was impossible to observe an immediate effect solely based on the introduction or removal of ER (the independent variable). Thus, the current study was limited to comparisons across similar phases alone.

Although results of the present study reflect those of previous research, further replication studies as well as including studies with larger numbers of participants from different backgrounds will further offset the above-mentioned limitations and strengthen the implications of this study. However, given the results of this study, it is hoped that instructors, researchers, and administrators will further consider the implementation of, and take advantage of the benefits ER can provide to language learners. In the future, the researcher plans on designing a similar study with the same strong controls over participants' reading method that includes a larger number of participants. The author also plans on researching other possible positive effects

of ER, such as increases in vocabulary size, incidental learning of vocabulary/kanji characters, and language proficiency gains.

5.4 Pedagogical Implications and Suggestions

Implementing an ER program that follows all ER principles can be difficult. Learners may forget the ER rules and use a dictionary or read a book above their level. They may also fall back into poor reading habits such as mental translation, focusing on individual words, and reading slowly. Thus, when implementing an ER program, the researcher recommends discussing the reasons for following ER principles with learners as well as continually following up with learners on their approach to ER. Displaying a list of ER principles in the view of learners may also help remind learners of the appropriate method for engaging in ER.

This study found that after engaging in ER using mostly elementary-level reading material, participants' reading rates on both elementary and intermediate-level reading material improved significantly. This suggests that ER will likely not only improve one's reading rate of similar-level easy materials, but also lead to reading rate gains on even more difficult materials. The pedagogical implication of this result is that instructors can assist learners in building reading speed on more difficult reading material by having learners read material that is easy for them. Thus, the researcher suggests not only implementing ER programs in stand-alone courses, but also alongside other coursework, including in courses that use IR activities as well.

One of the greatest benefits that can come from ER is a quickened reading speed. However, if learners are not given a goal to help them stretch, they may remain stagnant. When implementing an ER program, learners will likely be more motivated to follow the ER principle of reading faster rather than slower if given an assignment to read a certain number of characters

(or words) per week rather than a certain number of minutes. Thus, as participants who followed strict adherence to ER principles in the current study were able to achieve substantial reading rate gains after reading 12,000 characters per week, the researcher would suggest implementing a similar reading goal in future ER programs.

Participants in the current study met with the researcher to engage in ER. During ER sessions, participants also spent some time looking through the books available to read to find one that looked interesting to them. This time perusing books could have been reduced had participants looked over a book list or publisher websites with relevant information and chose what to read prior to beginning each ER session. If ER is to be conducted in class, instructors would benefit from having learners consult with them or choose what to read before coming to class rather than looking for something interesting to read during precious class time.

Learners with no experience with ER will likely be less aware of their own approach to reading and how it compares to the ER method. Thus, it would be advantageous for ER instructors to constantly display ER principles for learners to review. Furthermore, instructors should also continually follow up with learners regarding their approach to reading throughout any ER program.

Finally, instructors implementing an ER program should continually assist learners in breaking poor reading habits such as constant translation, memorization attempts, as well as dictionary use. If the learner feels these types of activities are necessary, they are likely reading something above their ER level. Lastly, the author would like to recommend a more widespread implementation of ER programs following strict adherence to ER principles in intermediate-level language courses in order to bring learners into a more virtuous cycle of reading growth.

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APPENDIX A. AIDEN'S INTERVENTION MEETING DETAILS

Aiden's Intervention Meeting Log

ER Meeting Number	Date	Start Time	End Time	Total Time
1	8/18/18	10:16 AM	11:35 AM	1:19
2	8/21/18	7:10 PM	8:20 PM	1:10
3	8/23/18	5:08 PM	6:10 PM	1:02
4	8/25/18	4:30 PM	5:55 PM	1:25
5	8/28/18	7:20 PM	8:50 PM	1:30
6	8/29/18	5:14 PM	7:00 PM	1:46
7	9/4/18	5:00 PM	6:15 PM	1:15
8	9/5/18	5:00 PM	6:05 PM	1:05
9	9/6/18	6:20 PM	7:20 PM	1:00
10	9/12/18	7:00 PM	8:00 PM	1:00
11	9/14/18	4:50 PM	5:30 PM	0:40
12	9/19/18	7:10 PM	8:50 PM	1:40
13	9/21/18	5:00 PM	6:24 PM	1:24
14	9/26/18	7:00 PM	9:00 PM	2:00
15	10/3/18	7:00 PM	8:30 PM	1:30
16	10/5/18	4:30 PM	5:30 PM	1:00
17	10/10/18	6:50 PM	7:45 PM	0:55
18	10/17/18	7:00 PM	9:00 PM	2:00
19	10/19/18	3:10 PM	3:50 PM	0:40
20	10/24/18	7:00 PM	8:35 PM	1:35
21	10/26/18	4:30 PM	5:30 PM	1:00
22	11/3/18	10:00 AM	11:30 AM	1:30
23	11/7/18	7:30 PM	8:30 PM	1:00
24	11/9/18	4:30 PM	5:30 PM	1:00
25	11/14/18	7:00 PM	8:00 PM	1:00
26	11/24/18	1:16 PM	2:25 PM	1:09
27	11/28/18	7:05 PM	8:00 PM	0:55
28	11/30/18	4:55 PM	5:52 PM	0:57
29	12/5/18	7:15 PM	8:16 PM	1:01
30	12/7/18	3:06 PM	3:57 PM	0:51

Aiden's Extensive Reading Log Part I

<u>Date</u>	<u>Start Time</u>	<u>End Time</u>	<u>Time Read</u>	<u>Title</u>	<u>Graded Level</u>	<u>iReadability Level</u>	<u>Type</u>	<u>Genre</u>
8/18/18	10:16:41	10:21:26	0:04:45	木村家の毎日「一郎、学校で」	0	Lower-Elementary	Fiction	Series
8/18/18	10:25:37	10:37:14	0:11:37	笠地蔵	1	Lower-Elementary	Fiction	Folk-tale
8/18/18	10:40:23	10:50:51	0:10:28	ジョンさん日本へ	1	Lower-Elementary	Fiction	Short Story
8/18/18	10:52:52	11:04:20	0:11:28	笑い話 (All)	1	Lower-Elementary	Fiction	Series
8/18/18	11:07:15	11:12:57	0:05:42	ハチの話	1	Lower-Elementary	Non-fiction	Historical
8/18/18	11:28:44	11:31:27	0:02:43	女の子	1	Lower-Elementary	Fiction	Short Story
8/21/18	19:14:15	19:26:31	0:12:16	武陵の桃源郷物語	2	Upper-Elementary	Fiction	Folk-tale
8/21/18	19:28:40	19:43:45	0:15:05	クリスマスプレゼント (The Gift of the Magi!)	2	Lower-Elementary	Fiction	Short Story
8/21/18	19:45:56	19:57:46	0:11:50	桃太郎	2	Lower-Elementary	Fiction	Folk-tale
8/21/18	20:08:55	20:23:51	0:14:56	かげのこいびと	3	Lower-Elementary	Fiction	Short Story
8/23/18	5:08:00	5:24:38	0:16:38	かげのこいびと	3	Lower-Elementary	Fiction	Short Story
8/23/18	5:27:09	5:55:20	0:28:11	鶴の恩返し	3	Upper-Elementary	Fiction	Folk-tale

Aiden's Extensive Reading Log Part I continued

<u>Date</u>	<u>Start Time</u>	<u>End Time</u>	<u>Time Read</u>	<u>Title</u>	<u>Graded Level</u>	<u>iReadability Level</u>	<u>Type</u>	<u>Genre</u>
8/25/18	4:38:39	5:04:26	0:25:47	かぐや姫	3	Upper-Elementary	Fiction	Folk-tale
8/25/18	5:08:00	5:38:14	0:30:14	日本の神話 『古事記』より	3	Upper-Elementary	Fiction	Myth
8/28/18	7:28:15	8:07:22	0:39:07	落語	3	Lower-Elementary	Fiction	Rakugo
8/28/18	8:13:13	8:31:44	0:18:31	最後の葉 (The Last Leaf)	2	Lower-Elementary	Fiction	Short Story
8/29/18	5:18:18	5:31:38	0:13:20	虹のキーホルダー	2	Lower-Elementary	Fiction	Short Story
8/29/18	5:33:25	5:40:22	0:06:57	好きこそ……？	2	Upper-Elementary	Non-fiction/ Fiction	Historical/ Folk Tale
8/29/18	5:43:05	5:49:58	0:06:53	ふしぎだな-ぼくが感じた不思議なこと2	3	Lower-Intermediate	Non-fiction	Social
8/29/18	5:52:50	6:26:57	0:34:07	魔術	3	Upper-Elementary	Fiction	Short Story
9/4/18	5:22:43	5:58:57	0:36:14	森鷗外短編集 (All)	4	Lower-Intermediate	Fiction	Short Story
9/5/18	5:07:52	5:22:05	0:14:13	一寸法師	2	Upper-Elementary	Fiction	Folk-tale
9/5/18	5:23:24	5:35:11	0:11:47	わらしべ長者	2	Lower-Elementary	Fiction	Folk-tale

Aiden's Extensive Reading Log Part I continued

<u>Date</u>	<u>Start Time</u>	<u>End Time</u>	<u>Time Read</u>	<u>Title</u>	<u>Graded Level</u>	<u>iReadability Level</u>	<u>Type</u>	<u>Genre</u>
9/5/18	5:39:42	6:01:38	0:21:56	注文の多い料理店	3	Lower-Elementary	Fiction	Short Story
9/6/18	6:20:21	6:54:41	0:34:20	芥川龍之介短編集 (All)	3	Upper-Elementary	Fiction	Short Story
9/6/18	6:58:12	7:07:26	0:09:14	圭子ちゃん	2	Upper-Elementary	Non-fiction	Historical
9/12/18	7:11:20	7:26:27	0:15:07	ごん狐	2	Lower-Elementary	Fiction	Short Story
9/12/18	7:26:59	7:40:03	0:13:04	日本のお風呂	2	Upper-Elementary	Non-fiction	Guide
9/12/18	7:46:05	7:57:11	0:11:06	富士山	2	Upper-Elementary	Non-fiction	Guide
9/14/18	16:58:12	17:20:25	0:22:13	カップヌードル/カラ オケ/ウォークマン ~ 日本で生まれて世界 へ~	3	Lower- Intermediate	Non-fiction	Historical/ Informative
9/19/18	7:12:11	7:40:46	0:28:35	金庫破り	3	Upper-Elementary	Fiction	Short Story
9/19/18	7:41:33	8:15:24	0:33:51	一房のぶどう	3	Lower- Intermediate	Fiction	Short Story
9/19/18	8:29:34	8:39:16	0:09:42	二人の恋人 他2話	2	Upper-Elementary	Fiction	Short Story
9/19/18	8:41:24	8:46:15	0:04:51	ジャックと豆の木	2	Upper-Elementary	Fiction	Fairy-tale
9/21/18	4:59:22	5:11:39	0:12:17	ジャックと豆の木	2	Upper-Elementary	Fiction	Fairy-tale
9/21/18	5:16:04	5:48:18	0:32:14	雪女	4	Upper-Elementary	Fiction	Short Story
9/21/18	5:51:16	5:58:43	0:07:27	裸の王様	2	Upper-Elementary	Fiction	Short Story

Aiden's Extensive Reading Log Part I continued

<u>Date</u>	<u>Start Time</u>	<u>End Time</u>	<u>Time Read</u>	<u>Title</u>	<u>Graded Level</u>	<u>iReadability Level</u>	<u>Type</u>	<u>Genre</u>
9/26/18	7:07:46	7:20:26	0:12:40	梨とり兄弟	3	Upper-Elementary	Fiction	Folk-tale
9/26/18	7:22:05	7:42:34	0:20:29	大男の話	3	Lower-Intermediate	Fiction	Short Story
9/26/18	7:45:36	8:14:08	0:28:32	アラジンと魔法のランプ～『アラビアン・ナイト』より～	3	Upper-Elementary	Fiction	Tale
9/26/18	8:17:19	8:30:58	0:13:39	シンデレラ	2	Upper-Elementary	Fiction	Fairy-tale
10/3/18	7:09:13	8:20:31	1:11:18	ローマの休日～Roman Holiday～	4	Upper-Elementary	Fiction	Short Story
10/5/18	4:44:06	5:28:29	0:44:23	杜子春	4	Upper-Elementary	Fiction	Short Story
10/10/18	6:57:23	7:17:46	0:20:23	小泉八雲の怖い話 (All)	3	Lower-Elementary	Fiction	Short Story
10/10/18	7:19:12	7:41:03	0:21:51	幸せな王子～The Happy Prince～	3	Upper-Elementary	Fiction	Short Story
10/17/18	7:08:43	7:44:04	0:35:21	女王 卑弥呼	4	Upper-Elementary	Non-fiction/ Fiction	Historical/ Tale
10/17/18	7:56:51	8:51:39	0:54:48	中国の悲しい恋物語 (All)	4	Lower-Intermediate	Fiction	Short Story
10/19/18	3:13:54	3:43:48	0:29:54	おちくぼ物語	4	Upper-Elementary	Fiction	Short Story
10/24/18	7:04:00	7:32:43	0:28:43	おちくぼ物語	4	Upper-Elementary	Fiction	Short Story
10/24/18	7:37:25	8:27:54	0:50:29	クリスマス・キャロル	4	Upper-Elementary	Fiction	Short Story
10/26/18	4:40:50	5:07:19	0:26:29	よだかの星	3	Upper-Elementary	Fiction	Short Story

Aiden's Extensive Reading Log Part I continued

<u>Date</u>	<u>Start Time</u>	<u>End Time</u>	<u>Time Read</u>	<u>Title</u>	<u>Graded Level</u>	<u>iReadability Level</u>	<u>Type</u>	<u>Genre</u>
10/26/18	5:10:35	5:26:47	0:16:12	ばかオンドル	3	Upper-Elementary	Fiction	Legend
11/3/18	10:09:23	10:25:46	0:16:23	五兵衛と津波	3	Upper-Elementary	Fiction	Short Story
11/3/18	10:27:38	10:48:31	0:20:53	海幸山幸 日本の神話	3	Upper-Elementary	Fiction	Myth
11/3/18	11:01:26	11:25:20	0:23:54	よつばと！1 第1話	3	Lower-Elementary	Fiction	Manga
11/7/18	7:19:43	8:29:41	1:09:58	よつばと！1 第2話 ～第6話	3	Lower-Elementary	Fiction	Manga
11/9/18	4:38:09	4:46:22	0:08:13	よつばと！1 第7話	3	Lower-Elementary	Fiction	Manga
11/9/18	4:48:27	5:21:10	0:32:43	よつばと！2 第8話 ～第11話	3	Lower-Elementary	Fiction	Manga
11/14/18	7:08:27	7:36:37	0:28:10	よつばと！2 第12話 ～第14話	3	Lower-Elementary	Fiction	Manga
11/14/18	7:40:30	7:53:47	0:13:17	ソーピーの冬の家～ The Cop and the Anthem ～	2	Lower-Elementary	Fiction	Short Story
11/24/18	1:21:36	2:18:53	0:57:17	赤毛クラブ	4	Lower-Intermediate	Fiction	Short Story
11/28/18	7:08:38	7:40:18	0:31:40	よつばと！3 第15話 ～第17話	3	Lower-Elementary	Fiction	Manga

Aiden's Extensive Reading Log Part I continued

<u>Date</u>	<u>Start Time</u>	<u>End Time</u>	<u>Time Read</u>	<u>Title</u>	<u>Graded Level</u>	<u>jReadability Level</u>	<u>Type</u>	<u>Genre</u>
11/28/18	7:57:36	8:01:13	0:03:37	カラスとハリネズミ	4	Upper-Elementary	Fiction	Folk-tale
11/30/18	4:58:11	5:40:41	0:42:30	よつばと！3 第18話 ～第21話	3	Lower-Elementary	Fiction	Manga
12/5/18	7:24:42	7:39:19	0:14:37	一休さん—その二—	2	Lower-Elementary	Non-fiction/ Fiction	Historical/ Short Story
12/5/18	7:46:19	8:03:04	0:16:45	夏美とルーク、そして Kiri	3	Upper-Elementary	Non-fiction	Short Story
12/7/18	3:20:11	3:36:30	0:16:19	夏美とルーク、そして Kiri	3	Upper-Elementary	Non-fiction	Short Story
12/7/18	3:49:48	3:55:56	0:06:08	サルとカニ	2	Lower-Elementary	Fiction	Folk-tale

Aiden's Extensive Reading Log Part II

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
木村家の毎日「一郎、学校で」	School	Print	Yes	Japanese Graded Readers Level 0 Vol. 1 Book 5
笠地蔵	Repayment/Moving	Print	Yes	Japanese Graded Readers Level 1 Vol. 2 Book 08
ジョンさん日本へ	Funny/Fun	Print	Yes	Japanese Graded Readers Level 1 Vol. 1 Book 3
笑い話 (All)	Funny	Print	Yes	Japanese Graded Readers Level 1 Vol. 1 Book 5

Aiden's Extensive Reading Log Part II continued

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
ハチの話	Moving	Print	Yes	Japanese Graded Readers Level 1 Vol. 1 Book 2
女の子	Moving	Print	Yes	Japanese Graded Readers Level 1 Vol. 1 Book 1
武陵の桃源郷物語	Fun	Digital	Yes	http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Chinese_paradise_with_ruby.pdf
クリスマスプレゼント (The Gift of the Magi!)	Moving	Print	Yes	Japanese Graded Readers Level 2 Vol. 1 Book 3
桃太郎	Fun	Print	Yes	Japanese Graded Readers Level 2 Vol. 1 Book 2
かげのこいびと	Fun/Moving	Print	Yes	Japanese Graded Readers Level 3 Vol. 2 Book 06
かげのこいびと	Fun/Moving	Print	Yes	Japanese Graded Readers Level 3 Vol. 2 Book 06
鶴の恩返し	Repayment/Moving	Print	Yes	Japanese Graded Readers Level 3 Vol. 2 Book 07
かぐや姫	Fun/Sad	Print	Yes	Japanese Graded Readers Level 3 Vol. 1 Book 3
日本の神話 『古事記』より	Fun	Print	Yes	Japanese Graded Readers Level 3 Vol. 2 Book 09
落語	Funny	Print	Yes	Japanese Graded Readers Level 3 Vol. 2 Book 10
最後の葉 (The Last Leaf)	Moving	Print	Yes	Japanese Graded Readers Level 2 Vol. 2 Book 10

Aiden's Extensive Reading Log Part II continued

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
虹のキーホルダー	Sad/Moving	Digital	Yes	http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Rainbow_key_ring_with_ruby.pdf
好きこそ……？	Informative/Fun	Digital	Yes	http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Sesshuu_Level2_with-ruby.pdf
ふしぎだな-ぼくが感じた不思議なこと 2	Funny/Fun	Digital	Yes	https://tadoku.org/wp/wp-content/uploads/2016/12/hushigidana2_A4.pdf
魔術	Fun/Moral	Print	Yes	Japanese Graded Readers Level 3 Vol. 2 Book 08
森鷗外短編集 (All)	Deep	Print	Yes	Japanese Graded Readers Level 4 Vol. 2 Book 10
一寸法師	Adventure/Moving	Print	Yes	Japanese Graded Readers Level 2 Vol. 2 Book 08
わらしべ長者	Fun/Moral	Print	Yes	Japanese Graded Readers Level 2 Vol. 2 Book 07
注文の多い料理店	Scary	Print	Yes	Japanese Graded Readers Level 3 Vol. 1 Book 2
芥川龍之介短編集 (All)	Funny/Moral	Print	Yes	Japanese Graded Readers Level 3 Vol. 1 Book 5
圭子ちゃん	Sad	Digital	Yes	http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Mar24_Keiko.pdf
ごん狐	Sad/Moving/Moral	Print	Yes	Japanese Graded Readers Level 2 Vol. 3 Book 13
日本のお風呂	Informative	Print	Yes	Japanese Graded Readers Level 2 Vol. 3 Book 11
富士山	Informative	Print	Yes	Japanese Graded Readers Level 2 Vol. 2 Book 06

Aiden's Extensive Reading Log Part II continued

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
カップヌードル/カラ オケ/ウォークマン ～ 日本で生まれて世界 へ～	Informative	Print	Yes	Japanese Graded Readers Level 3 Vol. 3 Book 14
金庫破り	Interesting	Print	Yes	NPO Japanese Graded Readers Level 3 Vol. 1 Book 2
一房のぶどう	Moving	Print	Yes	NPO Japanese Graded Readers Level 3 Vol. 1 Book 6
二人の恋人 他2話	Funny	Print	Yes	Taishukan Japanese Readers Level 2 Vol. 2 Book 4
ジャックと豆の木	Fun	Print	Yes	Taishukan Japanese Readers Level 2 Vol. 2 Book 2
ジャックと豆の木	Fun	Print	Yes	Taishukan Japanese Readers Level 2 Vol. 2 Book 2
雪女	Scary	Print	Yes	Japanese Graded Readers Level 4 Vol. 1 Book 1
裸の王様	Funny/Moral	Print	Yes	Taishukan Japanese Readers Level 2 Vol. 1 Book 6
梨とり兄弟	Fun	Print	Yes	Taishukan Japanese Readers Level 3 Vol. 3 Book 2
大男の話	Moving	Print	Yes	Taishukan Japanese Readers Level 3 Vol. 3 Book 5
アラジンと魔法のラ ンプ～『アラビアン ・ナイト』より～	Fun	Print	Yes	Japanese Graded Readers Level 3 Vol. 3 Book 12
シンデレラ	Fun	Print	Yes	Taishukan Japanese Readers Level 2 Vol. 2 Book 3
ローマの休日～Roman Holiday～	Love	Print	Yes	Japanese Graded Readers Level 4 Vol. 3 Book 15

Aiden's Extensive Reading Log Part II continued

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
杜子春	Moving/Moral	Print	Yes	Japanese Graded Readers Level 4 Vol. 1 Book 3
小泉八雲の怖い話 (All)	Scary/Moral	Print	Yes	Japanese Graded Readers Level 3 Vol. 1 Book 1
幸せな王子～ The Happy Prince～	Sad/Moving	Print	Yes	Japanese Graded Readers Level 3 Vol. 3 Book 11
女王 卑弥呼	Fun/Informative	Print	Yes	Taishukan Japanese Readers Level 4 Vol. 4 Book 2
中国の悲しい恋物語 (All)	Sad/Moving	Print	Yes	Taishukan Japanese Readers Level 4 Vol. 5 Book 2
おちくぼ物語	Love	Print	Yes	Taishukan Japanese Readers Level 4 Vol. 4 Book 5
おちくぼ物語	Love	Print	Yes	Taishukan Japanese Readers Level 4 Vol. 4 Book 5
クリスマス・キャロ ル	Moral	Print	Yes	Taishukan Japanese Readers Level 4 Vol. 5 Book 4
よだかの星	Moving	Print	Yes	Taishukan Japanese Readers Level 3 Vol. 3 Book 1
ばかオンダル	Fun/Moving	Print	Yes	Taishukan Japanese Readers Level 3 Vol. 3 Book 3
五兵衛と津波	Moving	Print	Yes	Taishukan Japanese Readers Level 3 Vol. 3 Book 7
海幸山幸 日本の神 話	Fun	Print	Yes	Taishukan Japanese Readers Level 3 Vol. 3 Book 4

Aiden's Extensive Reading Log Part II continued

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
よつばと！1 第1話	Funny/Fun	Print	Yes	3E よつばと！1
よつばと！1 第2話 ～第6話	Funny/Fun	Print	Yes	3E よつばと！1
よつばと！1 第7話	Funny/Fun	Print	Yes	3E よつばと！1
よつばと！2 第8話 ～第11話	Funny/Fun	Print	Yes	3E よつばと！2
よつばと！2 第12話 ～第14話	Funny/Fun	Print	Yes	3E よつばと！2
ソーピーの冬の家～ The Cop and the Anthem ～	Funny	Print	Yes	Japanese Graded Readers Level 2 Vol. 3 Book 14
赤毛クラブ	Mystery	Print	Yes	Taishukan Japanese Readers Level 4 Vol. 6 Book 2
よつばと！3 第15話 ～第17話	Funny/Fun	Print	Yes	3E よつばと！3
カラスとハリネズミ	Moral	Digital	Yes	https://tadoku.org/wp/wp-content/uploads/2016/12/karasu_harinezumi_A4.compressed.pdf
よつばと！3 第18話 ～第21話	Funny/Fun	Print	Yes	3E よつばと！3
一休さんーその二ー	Witty/Fun/Moral	Print	Yes	Japanese Graded Readers Level 2 Vol. 3 Book 15
夏美とルーク、そして Kiri	Fun/Sad	Digital	Yes	http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_3/Natsumi_Luke_and_Kiri_with_ruby.pdf

Aiden's Extensive Reading Log Part II continued

<u>Title</u>	<u>Subgenre</u>	<u>Format</u>	<u>Furigana</u>	<u>Location</u>
夏美とルーク、そして Kiri	Fun/Sad	Digital	Yes	http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_3/Natsumi_Luke_and_Kiri_with_ruby.pdf
サルとカニ	Moral	Print	Yes	Taishukan Japanese Readers Level 2 Vol. 1 Book 5

Aiden's Extensive Reading Log Part III

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/Minute</u>	<u>Words / Minute</u>
木村家の毎日「一郎、学校で」	214	123	45.05	25.89
笠地蔵	665	379	57.25	32.63
ジョンさん日本へ	1,102	657	105.29	62.77
笑い話 (All)	1,544	947	134.65	82.59
ハチの話	492	308	86.32	54.04
女の子	436	234	160.49	86.13
武陵の桃源郷物語	1,673	1,101	136.39	89.76
クリスマスプレゼント (The Gift of the Magi!)	1,963	1,176	130.14	77.97
桃太郎	1,839	1,018	155.41	86.03

Aiden's Extensive Reading Log Part III continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/ Minute</u>	<u>Words / Minute</u>
かげのこいびと	1,677	997	112.3	66.76
かげのこいびと	1,668	1,031	100.28	61.98
鶴の恩返し	3,610	2,249	128.09	79.8
かぐや姫	3,578	2,229	138.77	86.45
日本の神話 『古事 記』より	3,284	2,176	108.62	71.97
落語	4,877	3,087	124.68	78.92
最後の葉 (The Last Leaf)	2,552	1,556	137.82	84.03
虹のキーホルダー	2,013	1,135	150.98	85.12
好きこそ……？	1,042	637	149.93	91.65

Aiden's Extensive Reading Log Part III continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/ Minute</u>	<u>Words / Minute</u>
ふしぎだな-ぼくが感じた不思議なこと 2	675	396	98.06	57.53
魔術	4,653	2,824	136.38	82.77
森鷗外短編集 (All)	5,188	3,232	143.18	89.2
一寸法師	2,281	1,297	160.45	91.23
わらしべ長者	1,641	1,012	139.26	85.88
注文の多い料理店	3,050	1,885	139.06	85.94
芥川 龍之介 短編集 (All)	4,810	3,064	140.1	89.24
圭子ちゃん	1,436	839	155.52	90.87
ごん狐	1,976	1,381	130.72	91.36
日本のお風呂	1,951	1,203	149.31	92.07
富士山	1,857	1,158	167.3	104.32
カップヌードル/カラオケ/ウォークマン ~ 日本で生まれて世界へ~	4,939	2,740	222.31	123.33

Aiden's Extensive Reading Log Part III continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/Minute</u>	<u>Words / Minute</u>
金庫破り	3,748	2,237	131.13	78.26
一房のぶどう	4,241	2,609	125.29	77.08
二人の恋人 他2話	1,322	848	136.29	87.42
ジャックと豆の木	644	385	132.78	79.38
ジャックと豆の木	1,711	1,068	139.29	86.95
雪女	4,110	2,625	127.51	81.44
裸の王様	1,739	1,121	233.42	150.47
梨とり兄弟	2,015	1,223	159.08	96.55
大男の話	2,657	1,684	129.72	82.21
アラジンと魔法のランプ～『アラビアン・ナイト』より～	4,335	2,509	151.93	87.93
シンデレラ	2,467	1,393	180.73	102.05
ローマの休日～ Roman Holiday～	9,265	5,381	129.94	75.47
杜子春	6,619	4,350	149.13	98.01
小泉八雲の怖い話 (All)	2,988	1,866	146.59	91.55

Aiden's Extensive Reading Log Part III continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/ Minute</u>	<u>Words / Minute</u>
幸せな王子～ The Happy Prince～	3,491	2,164	159.77	99.04
女王 卑弥呼	5,790	3,736	163.79	105.69
中国の悲しい恋物語 (All)	7,312	4,797	133.43	87.54
おちくぼ物語	4,207	2,699	140.7	90.27
おちくぼ物語	3,897	2,508	135.71	87.34
クリスマス・キャロ ル	7,786	4,495	154.23	89.04
よだかの星	3,467	2,182	130.91	82.39
ばかオンドル	2,791	1,660	172.28	102.47
五兵衛と津波	2,493	1,603	152.17	97.84
海幸山幸 日本の神 話	2,714	1,770	129.96	84.76
よつばと！1 第1話	2,277	1,332	95.27	55.73
よつばと！1 第2話 ～第6話	7,073	4,019	101.09	57.44

Aiden's Extensive Reading Log Part III continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/ Minute</u>	<u>Words / Minute</u>
よつばと！1 第7話	871	516	106	62.8
よつばと！2 第8話 ～第11話	3,740	2,131	114.31	65.13
よつばと！2 第12話 ～第14話	3,296	1,887	117.02	66.99
ソーピーの冬の家～ The Cop and the Anthem～	2,228	1,296	167.73	97.57
赤毛クラブ	10,128	5,913	176.81	103.22
よつばと！3 第15話 ～第17話	3,647	2,022	115.17	63.85
カラスとハリネズミ	699	382	193.27	105.62
よつばと！3 第18話 ～第21話	5,482	3,072	128.99	72.28
一休さん—その二—	2,581	1,623	176.58	111.04
夏美とルーク、そし て Kiri	3,220	1,778	192.24	106.15

Aiden's Extensive Reading Log Part III continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Characters/Minute</u>	<u>Words / Minute</u>
夏美とルーク、そして Kiri	2,706	1,520	165.84	93.16
サルとカニ	1,423	889	232.01	144.95

Aiden's Extensive Reading Log Part IV

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
木村家の毎日「一郎、学校で」	Yes. Easy to read. somewhat interesting.	I liked it	2	
笠地藏	Yes. nice story, easy to read.	I liked it	2	
ジョンさん日本へ	Yes. Interesting story. easy read.	I liked it	2	
笑い話 (All)	Yes, had some funny stories.	It was really good	3	
ハチの話	Yes, it was a touching story.	It was really good	3	
女の子	yes, it was easy to read. nice story.	I liked it	2	
武陵の桃源郷物語	yes, it was an interesting story to read.	It was really good	3	
クリスマスプレゼント (The Gift of the Magi!)	Yes, it was a familiar, touching story.	It was really good	3	

Aiden's Extensive Reading Log Part IV continued

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
桃太郎	yes, it was a good story, easy to understand.	It was really good	3	
かげのこいびと	Yes, I liked up to what I read. a bit more challenging, but I still feel that I understand 95% or more.	I liked it	2	Finished through p. 13 「全然よくないわ！」
かげのこいびと	Yes, I got to finish the story, and it had a really cool story.	It was really good	3	
鶴の恩返し	Yes, it had a new kinda story I havent heard before. really touching.	It was really good	3	
かぐや姫	yes, it was a good story. find it kinda funny that a lot of these stories have the theme of old people finding a kid.	I liked it	2	
日本の神話 『古事記』より	Yes, interesting stories of Japanese beginning.	I liked it	2	Finished through p. 21 (up to chapter 5)
落語	Yes, I thought a couple of the stories were pretty funny.	I liked it	2	
最後の葉 (The Last Leaf)	yes, it was a touching story	It was really good	3	
虹のキーホルダー	Yes, it was really touching, also easy to understand	It was really good	3	
好きこそ……？	yes, it was interesting at the end to learn a couple new Kotowazas	I liked it	2	

Aiden's Extensive Reading Log Part IV continued

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
ふしぎだな-ぼくが感じた不思議なこと 2	Yes, it was cool to learn some stuff, and was fun to read.	It was really good	3	
魔術	Yes, it was a good story to read.	I liked it	2	
森鷗外短編集 (All)	Yes, I finished the first story about the boat, and it was really interesting and sad.	I liked it	2	read through p. 22
一寸法師	Yes, it was a good adventure tale.	I liked it	2	
わらしべ長者	Yes, it was an interesting read, somewhat funny.	I liked it	2	
注文の多い料理店	Yes, it was actually a bit creepy scary. haha	It was really good	3	
芥川龍之介短編集 (All)	Yes, Both stories were interesting to read.	I liked it	2	
圭子ちゃん	Yes, it was a pretty moving story.	It was really good	3	
ごん狐	Yes, it was an interesting moral story.	I liked it	2	
日本のお風呂	Yes, I learned a bit about ofuro's	I liked it	2	
富士山	Yes, it was a good, informative book.	I liked it	2	
カップヌードル/カラオケ/ウォークマン ~ 日本で生まれて世界へ~	Yes, it was pretty interesting to read the different things.	I liked it	2	

Aiden's Extensive Reading Log Part IV continued

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
金庫破り	Yes, it was a touching story of life changing.	It was really good	3	
一房のぶどう	Yes, it was a touching story of a kid who learned not to steal.	I liked it	2	
二人の恋人 他2話	Yes, it had some pretty funny stories.	I liked it	2	
ジャックと豆の木	Yes, Classic story, always a little different.	It was really good	3	Read until page 8
ジャックと豆の木	Yes, Classic story, always a little different.	It was really good	3	Finished from page 8
雪女	Yes, it was kind of predictable, but a good story.	It was really good	3	
裸の王様	Yes, it was actually the first time I read that story. pretty funny.	I liked it	2	
梨とり兄弟	Yes, it was interesting to read.	I liked it	2	
大男の話	Yes, it ended pretty sadly though.	I liked it	2	
アラジンと魔法のランプ～『アラビアン・ナイト』より～	Yes, it was quite different then I expected from the alladin I knew.	I liked it	2	
シンデレラ	Yes, classic fairytale, different little details.	I liked it	2	
ローマの休日～Roman Holiday～	Yes, it was a little harder, but still enjoyable.	I liked it	2	
杜子春	Yes, it was a pretty good story about finding what you really want in life.	It was really good	3	

Aiden's Extensive Reading Log Part IV continued

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
小泉八雲の怖い話 (All)	Yes, it had interesting, kinda creepy stories.	I liked it	2	
幸せな王子～ The Happy Prince～	Yes, it was a touching story of giving all you have to help others.	It was really good	3	
女王 卑弥呼	yes, It was very informative.	I liked it	2	
中国の悲しい恋物語 (All)	Yes, It was actually very touching,	It was really good	3	
おちくぼ物語	Yes, I liked what I had read so far.	I liked it	2	read up to chpt 5
おちくぼ物語	Yes, it had a really nice ending.	I liked it	2	finished from chapter 5.
クリスマス・キャロル	Yes, I liked seeing how everything was translated into Japanese.	I liked it	2	
よだかの星	yes, I thought it was a bit weird, but somewhat amusing.	I liked it	2	
ばかオンダル	I liked the story of some random princess marrying a dude because her father kept saying cruelly that she would.	I liked it	2	
五兵衛と津波				
海幸山幸 日本の神話				

Aiden's Extensive Reading Log Part IV continued

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
よつばと！1 第1話	Yes, so far its a really interesting manga.	I liked it	2	read up to chpt 2, pg53 (Your speed seems to have gone down on this one. Maybe because of the manga style/pictures? What do you think?)
よつばと！1 第2話 ～第6話	Yes, It has a lot of interesting, funny situations.	It was really good	3	read up to chpt 7, 206
よつばと！1 第7話	Yes, I really like the story.	It was really good	3	finished from chpt 7
よつばと！2 第8話 ～第11話	Yes, its just as good as the first book!	It was really good	3	read up to chpt 12 pg 111
よつばと！2 第12話 ～第14話	Yes, I just loved the book, tons of funny stories.	It was really good	3	
ソーピーの冬の家～ The Cop and the Anthem ～	Yes, I thought it was pretty interesting.	I liked it	2	
赤毛クラブ	Yes, suprised me to find a sherlock holms story! very intersting.	It was really good	3	
よつばと！3 第15話 ～第17話	Yes, I have just enjoyed the stories so far.	It was really good	3	read up to chpt 18.
カラスとハリネズミ	Yes, I thought it was a really inspiring story about morals.	I liked it	2	
よつばと！3 第18話 ～第21話	Yes, I liked all of the books I read from this, very entertaining!	It was really good	3	

Aiden's Extensive Reading Log Part IV continued

<u>Title</u>	<u>Was it enjoyable/interesting? Why?</u>	<u>Rating</u>	<u>Rating Score</u>	<u>How far you got if you didn't finish (pg. # or sentence), other thoughts, comments, ideas, suggestions, questions</u>
一休さん—その二—	Yes, I thought it had some funny japanese puns, and interesting ways of thinking.	I liked it	2	
夏美とルーク、そして Kiri	yes, what I read so far has been interesting.	I liked it	2	read up to and including pg 9.
夏美とルーク、そして Kiri	Yes, it was touching because I also have a dog.	I liked it	2	finished to the end from pg 10.
サルとカニ	Yes, it was pretty entertaining.	I liked it	2	

APPENDIX B. DISPLAY OF ER PRINCIPLES

Framed Reminder of ER Principles Displayed to Participants During ER Meetings

ER PRINCIPLES

1. Books should be **Easy**
 - Start from scratch
 - No need to use a dictionary
 - Know **95% or more** of words
 - If difficult (<95%), choose a different book
2. Read as much as possible
3. Reading speed is usually **faster** rather than slower
 - Don't use a dictionary
 - Keep Reading
 - Practice reading strategies: Guessing or Skipping/Ignoring the unknown
 - **Read faster** → Read more → Understand better →
→ Enjoy reading → **Read faster** →
4. You choose what to read
5. Read for pleasure, information, & general understanding

Extensive Reading leads not only to gains in reading proficiency but also to overall gains in language learning.

APPENDIX C. IDEALIZED SCHEDULE OF ER SESSIONS

Idealized Schedule of ER Sessions Pilot Study

<u>Week</u>	<u>Meeting</u>	<u>Day</u>	<u>Date</u>	<u>Activity</u>	<u>Reading Goal in Characters</u>	<u>Reading Goal Total</u>
	1	Mon	6/25	Questionnaire	0	0
1	2	Wed	6/27	Vocabulary Size Test J-CAT	0	0
	3	Fri	6/29	5 Reading Tests	0	0
	4	Mon	7/2	Reading/Test	4,800	4,800
2	5	Wed	7/4	Reading/Test	4,800	9,600
	6	Fri	7/6	Reading/Test	2,400	12,000
	7	Mon	7/9	Reading/Test	4,800	16,800
3	8	Wed	7/11	Reading/Test	4,800	21,600
	9	Fri	7/13	Reading/Test	2,400	24,000
	10	Mon	7/16	Reading/Test	4,800	28,800
4	11	Wed	7/18	Reading/Test	4,800	33,600
	12	Fri	7/20	Reading/Test	2,400	36,000
	13	Mon	7/23	Reading/Test	4,800	40,800
5	14	Wed	7/25	Reading/Test	4,800	45,600
	15	Fri	7/27	Reading/Test	2,400	48,000
	16	Mon	7/30	Reading/Test	4,800	52,800
6	17	Wed	8/1	Reading/Test	4,800	57,600
	18	Fri	8/3	Reading/Test	2,400	60,000
	19	Mon	8/6	Reading/Test	4,800	64,800
7	20	Wed	8/8	Reading/Test	4,800	69,600
	21	Fri	8/10	Reading/Test	2,400	72,000

Idealized Schedule of ER Sessions

<u>Week</u>	<u>Meeting</u>	<u>Day</u>	<u>Date</u>	<u>Activity</u>	<u>Reading Goal in Characters</u>	<u>Reading Goal Total</u>
	22	Mon	8/13	Reading/Test	4,800	76,800
8	23	Wed	8/15	Reading/Test	4,800	81,600
	24	Fri	8/17	Reading/Test	2,400	84,000
	25	Mon	8/20	Reading/Test	4,800	88,800
9	26	Wed	8/22	Reading/Test	4,800	93,600
	27	Fri	8/24	Reading/Test	2,400	96,000

Idealized Schedule of ER Sessions continued

<u>Week</u>	<u>Meeting</u>	<u>Day</u>	<u>Date</u>	<u>Activity</u>	<u>Reading Goal in Characters</u>	<u>Reading Goal Total</u>
10	28	Mon	8/27	Reading/Test	4,800	100,800
10	29	Wed	8/29	Reading/Test	4,800	105,600
	30	Fri	8/31	Reading/Test	2,400	108,000
11	31	Mon	9/3	Reading/Test	4,800	112,800
	32	Wed	9/5	Reading/Test	4,800	117,600
	33	Fri	9/7	Reading/Test	2,400	120,000
12	34	Mon	9/10	5 Reading Tests	0	120,000
	35	Tue	9/11	Reading/Test	4,800	124,800
	36	Wed	9/12	Reading/Test	4,800	129,600
	37	Fri	9/14	Reading/Test	2,400	132,000
13	38	Mon	9/17	Reading/Test	4,800	136,800
	39	Wed	9/19	Reading/Test	4,800	141,600
	40	Fri	9/21	Reading/Test	2,400	144,000
14	41	Mon	9/24	Reading/Test	4,800	148,800
	42	Wed	9/26	Reading/Test	4,800	153,600
	43	Fri	9/28	Reading/Test	2,400	156,000
	44	Mon	10/1	Reading/Test	4,800	160,800
15	45	Wed	10/3	Reading/Test	4,800	165,600
	46	Fri	10/5	Reading/Test	2,400	168,000
	47	Mon	10/8	Reading/Test	4,800	172,800
16	48	Wed	10/10	Reading/Test	4,800	177,600
	49	Fri	10/12	Reading/Test	2,400	180,000
	50	Mon	10/15	Reading/Test	4,800	184,800
17	51	Wed	10/17	Reading/Test	4,800	189,600
	52	Fri	10/19	Reading/Test	2,400	192,000
	53	Mon	10/22	Reading/Test	4,800	196,800
18	54	Wed	10/24	Reading/Test	4,800	201,600
	55	Fri	10/26	Reading/Test	2,400	204,000
	56	Mon	10/29	5 Reading Tests	0	204,000
19	57	Tue	10/30	Reading/Test	4,800	208,800
	58	Wed	10/31	Reading/Test	4,800	213,600
	59	Fri	11/2	Reading/Test	2,400	216,000
20	60	Mon	11/5	Reading/Test	4,800	220,800
	61	Wed	11/7	Reading/Test	4,800	225,600
	62	Fri	11/9	Reading/Test	2,400	228,000
21	63	Mon	11/12	Reading/Test	4,800	232,800

Idealized Schedule of ER Sessions continued

<u>Week</u>	<u>Meeting</u>	<u>Day</u>	<u>Date</u>	<u>Activity</u>	<u>Reading Goal in Characters</u>	<u>Reading Goal Total</u>
21	64	Wed	11/14	Reading/Test	4,800	237,600
	65	Fri	11/16	Reading/Test	2,400	240,000
	66	Mon	11/19	5 Reading Tests	0	240,000
22	67	Wed	11/21	Holiday	0	240,000
	68	Fri	11/23		0	240,000
	69	Mon	11/26	Reading/Test	4,800	244,800
23	70	Wed	11/28	Reading/Test	4,800	249,600
	71	Fri	11/30	Reading/Test	2,400	252,000
	72	Mon	12/3	Reading/Test	4,800	256,800
24	73	Wed	12/5	Reading/Test	4,800	261,600
	74	Fri	12/7	Reading/Test	2,400	264,000
25	75	Mon	12/10	Questionnaire	0	264,000

APPENDIX D. QUESTIONNAIRES

Pre-Study Questionnaire

- I. What is the pseudonym the researcher provided to you?
- II. What is your age?
- III. What is your sex? (Male, Female)
- IV. What is your first language? (English, Chinese, Other)
- V. What is/was your major in school?
- VI. Have you completed or are you planning on completing a minor? (Yes, No)
- VII. **[If Yes to QVI]** What is/was your minor?
- VIII. **Are you currently enrolled in any Japanese course(s)?**
- IX. **[If Yes to QVIII]** What Japanese course(s) are you currently enrolled in? (211, 301, 302, 311, 321, 322, 325, 326, 345, 350, 351, 352, 377, 390, 411, 441, 443, 444, 495)
- X. What Japanese course(s) have you completed in the past? (101, 102, 201, 202, 211, 301, 302, 311, 321, 322, 325, 326, 345, 350, 351, 352, 377, 390, 411, 441, 443, 444, 495)
- XI. Did you serve a mission in Japan? (Yes, No)
- XII. **[If Yes to QXI]** How many months were you in Japan as part of your mission?
- XIII. Have you studied abroad in Japan? (Yes, No)
- XIV. **[If Yes to QXII]** How many weeks did you study abroad in Japan?
- XV. Have you visited Japan for other reasons? (Yes, No)
- XVI. **[If Yes to QXIV]** How many weeks, in total, have you stayed in Japan (**NOT** including time spent on a mission or time spent studying abroad)?

Likert Scale Question

Please indicate to what degree you agree or disagree with the following statements: (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

1. Most of what I read in Japanese is easy reading material.
2. I know where to find a variety of Japanese reading material on a wide range of topics.
3. Most of what I read in Japanese is what I personally choose to read.
4. I read in Japanese as much as possible.
5. When I read in Japanese I most often read for pleasure.
6. When I read in Japanese I most often read for general understanding (to get the gist of the text).
7. I find reading in Japanese to be a reward in itself.
8. My reading speed in Japanese is usually faster rather than slower.
9. My Japanese reading is most often done individually and silently.
10. I have time and am able to read 2,400 characters (about 3 single-spaced pages) of Japanese each weekday.

Post-Study Questionnaire

- I. What is the pseudonym the researcher provided to you?
- II. Was this the first time you experienced extensive reading? (Yes, No)

Likert Scale Questions

Please indicate to what degree you agree or disagree with the following statements based on your reading of Japanese NOW having participated in this study. Having participated in this study, now:

(Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

1. Most of what I read in Japanese is easy reading material.
2. I know where to find a variety of Japanese reading material on a wide range of topics.
3. Most of what I read in Japanese is what I personally choose to read.
4. I read in Japanese as much as possible.
5. When I read in Japanese I most often read for pleasure.
6. When I read in Japanese I most often read for general understanding (to get the gist of the text).
7. I find reading in Japanese to be a reward in itself.
8. My reading speed in Japanese is usually faster rather than slower.
9. My Japanese reading is most often done individually and silently.
10. I have time and am able to read 2,400 characters (about 3 single-spaced pages) of Japanese each weekday.

Please indicate to what degree you agree or disagree with the following statements based on your reading of Japanese **PRIOR** to beginning the study. **Prior to this study:**

(Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

11. Most of what I read in Japanese was easy reading material.
12. I knew where to find a variety of Japanese reading material on a wide range of topics.
13. Most of what I read in Japanese was what I personally choose to read.
14. I read in Japanese as much as possible.
15. When I read in Japanese I most often read for pleasure.
16. When I read in Japanese I most often read for general understanding (to get the gist of the text).
17. I found reading in Japanese to be a reward in itself.
18. My reading speed in Japanese was usually faster rather than slower.
19. My Japanese reading was most often done individually and silently.
20. I had time and was able to read 2,400 characters (about 3 single-spaced pages) of Japanese each weekday.

The following questions inquire **ONLY** about your experience with the extensive reading you completed as part of this study (**NOT the reading tests**). Please indicate to what degree you agree or disagree with the following statements. (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

21. I like extensive reading.
22. I like the calm setting of an extensive reading session.
23. I like that extensive reading allows me to choose my own reading materials.

24. Extensive reading was helpful in studying/learning Japanese.
25. I would like to continue extensive reading in the future.
26. I am convinced that I will definitely read more in the future.
27. I believe that more learners should be given the chance to experience extensive reading.

During extensive reading I

28. can concentrate/focus better.
29. find that I have more time to figure out words.
30. find that I recognize more words.
31. understand better what I am reading.
32. need less help than I used to.
33. feel that I can read better.
34. feel more comfortable because no one is listening to my reading.
35. feel more confident because no one is listening to my reading.
36. generally feel more relaxed.
37. do **NOT** feel that reading is difficult.
38. do **NOT** feel pressured/stressed out.
39. find that reading is enjoyable.
40. feel motivated to read more.

Open Ended Questions

1. **[If Strongly Agree or Agree to Q23]** What made extensive reading an enjoyable experience for you?
2. **[If Neutral to Q23]** What made extensive reading neither an enjoyable nor less enjoyable experience for you?
3. **[If Disagree or Strongly Disagree to Q23]** What made extensive reading a less enjoyable experience for you?
4. **[If Strongly Agree or Agree to Q26]** What made extensive reading a helpful learning experience for you?
5. **[If Neutral to Q26]** What made extensive reading neither a helpful nor less helpful learning experience for you?
6. **[If Disagree or Strongly Disagree to Q26]** What made extensive reading a less helpful learning experience for you?
7. **[If Strongly Agree or Agree to Q29]** Why do you believe more learners should be given the chance to experience extensive reading?
8. **[If Disagree or Strongly Disagree to Q29]** You indicated that you disagree or strongly disagree with the statement “I believe that more learners should be given the chance to experience extensive reading.” Please indicate why you disagree/strongly disagree with this statement?
9. **[If Strongly Agree or Agree to Q30]** What about extensive reading helped you concentrate/focus better?
10. **[If Disagree or Strongly Disagree to Q30]** What about extensive reading impeded your ability to concentrate/focus better?
11. **[If Disagree or Strongly Disagree to Q38]** What about extensive reading impeded your ability to generally feel more relaxed?
12. **[If Disagree or Strongly Disagree to Q39]** What about extensive reading made you feel that reading is difficult?

13. **[If Disagree or Strongly Disagree to Q40]** What about extensive reading made you feel pressured/stressed out?
14. **[If Strongly Agree or Agree to Q42]** How did extensive reading make you feel motivated to read more?
15. **[If Disagree or Strongly Disagree to Q42]** What about extensive reading impeded your ability to feel motivated to read more?

APPENDIX E. READING TEST DETAILS

Summary of Baseline Test Data Part I

<u>Title</u>	<u>jReadability Level</u>	<u>98% Headword Level</u>	<u>Type</u>	<u>Genre</u>	<u>Character Count</u>	<u>Word Count</u>
マンガの神様：手塚治虫 [Manga no kamisama: Tedzuka Osamu]	Intermediate	4,000	Non-fiction	Expository Passage	736	408
スポーツを通して学ぶ心 [Supōtsu o tōshite manabu kokoro]	Intermediate	4,000	Non-fiction	Expository Passage	985	556
お弁当 [Obentō]	Intermediate	4,000	Fiction	Short Story	912	570
傘 [Kasa]	Intermediate	4,000	Fiction	Short Story	901	598
まさかの話 [Masaka no hanashi]	Intermediate	4,000	Fiction	Folk-tale	934	586
奈良の大きな仏の像 [Nara no ōkina hotoke no zō]	Intermediate	4,000	Non-fiction	Expository Passage	856	534
インスタントラーメン発明物語 [Insutantorāmen hatsumeimonogatari]	Intermediate	4,000	Non-fiction	Expository Passage	919	502
日本の神話：天の岩戸 [Nihon no shinwa: Amanoiwato]	Intermediate	4,000	Fiction	Myth	789	517
写真 [Shashin]	Intermediate	4,000	Fiction	Short Story	720	448
自分の頭を食べたへび [Jibun no atama o tabeta hebi]	Intermediate	4,000	Fiction	Folk-tale	898	572
三億円事件 [San'okuen jiken]	Intermediate	4,000	Non-fiction	Expository Passage	982	619

Summary of Baseline Test Data Part I continued

日本の地理 [Nihon no chiri]	Intermediate	4,000	Non-fiction	Expository Passage	909	561
<u>Title</u>	<u>iReadability Level</u>	<u>98% Headword Level</u>	<u>Type</u>	<u>Genre</u>	<u>Character Count</u>	<u>Word Count</u>
マスク [Masuku]	Intermediate	4,000	Fiction	Short Story	967	586
少女とシロクマ [Shōjo to shirokuma]	Intermediate	4,000	Fiction	Folk-tale	948	593
頭のいい彦一 [Atama no ī Hikoichi]	Intermediate	4,000	Fiction	Folk-tale	806	493
永井隆 [Nagai Takashi]	Intermediate	4,000	Non-fiction	Expository Passage	941	592
日本の劇 [Nihon no geki]	Intermediate	4,000	Non-fiction	Expository Passage	735	470
くまの貴方 [Kuma no Anata]	Intermediate	4,000	Fiction	Short Story	776	463
お坊さんの話 [Obōsan no hanashi]	Intermediate	4,000	Fiction	Folk-tale	696	414
男とネコ [Otoko to neko]	Intermediate	4,000	Fiction	Folk-tale	747	458

Summary of Baseline Test Data Part II

<u>Title</u>	<u>Notes</u>
マンガの神様：手塚治虫 [Manga no kamisama: Tedzuka Osamu]	98.3% of running words within first 4,000 word families; Adapted from Manga no kamisama: Tezuka Osamu (Oka et al., 2009, pp. 153-154)
スポーツを通して学ぶ心 [Supōtsu o tōshite manabu kokoro]	98.6% of running words within first 4,000 word families; Adapted from Supōtsu o tōshite manabu kokoro (Oka et al., 2009, pp. 79-80)
お弁当 [Obentō]	98.3% of running words within first 4,000 word families; Adapted from Obentō [Packed lunch] by Kuniko Mukoda.

Summary of Baseline Test Data Part II continued

傘 [Kasa]	99.2% of running words within first 4,000 word families; Adapted from Amagasa [Umbrella] by Yasunari Kawabata.
まさかの話 [Masaka no hanashi]	98.5% of running words within first 4,000 word families; Adapted from Hukumusume.com. (2012). Masaka no hanashi. Retrieved from http://hukumusume.com/douwa/pc/jap/01/20.htm
<u>Title</u>	<u>Notes</u>
奈良の大きな仏の像 [Nara no ōkina hotoke no zō]	100% of running words within first 4,000 word families; Adapted from Shiraishi, H. (2016). Nara no daibutsu. In Taishukan Japanese Readers (Vol. 4). Japan: Taishukan Publishing.
インスタントラーメン発明物語 [Insutantorāmen hatsumeimonogatari]	99.2% of running words within first 4,000 word families; Adapted from Insutanto rāmen hatsumeimonogatari (Oka et al., 2009, pp. 102-103)
日本の神話：天の岩戸 [Nihon no shinwa: Amanoiwato]	98.8% of running words within first 4,000 word families; Adapted from Nihon no shinwa: Ama no iwato (Oka et al., 2009, p. 133)
写真 [Shashin]	98.5% of running words within first 4,000 word families; Adapted from Shashin [Photograph] by Yasunari Kawabata.
自分の頭を食べたへび [Jibun no atama o tabeta hebi]	98.9% of running words within first 4,000 word families; Adapted from Hukumusume.com. (2012). Masaka no hanashi sono 2: Jibun no atama o tabeta hebi. Retrieved from http://hukumusume.com/douwa/pc/jap/01/22c.html
三億円事件 [San'okuen jiken]	98.7% of running words within first 4,000 word families; Adapted from Kawamoto, K. (2007). Sekai no dokoka de Nihon no dokoka de ~hontōniatta hanashi~. In Japanese Graded Readers Level 4 (Vol. 2). Japan: Ask Publishing.
日本の地理 [Nihon no chiri]	98.6% of running words within first 4,000 word families; Adapted from Nihon no chiri (Oka et al., 2009, pp. 4-5)
マスク [Masuku]	98.8% of running words within first 4,000 word families; Adapted from Masuku [Mask] by Kuniko Mukoda.
少女とシロクマ [Shōjo to shirokuma]	98.0% of running words within first 4,000 word families; Adapted from Kusunurina, D. (2017). Shōjo to shirokuma. Japan: NPO Tadoku Supporters. Retrieved from https://tadoku.org/wp/wp-content/uploads/2016/12/0129_shoujotoshirokuma-1.pdf
頭のいい彦一 [Atama no ī Hikoichi]	99.0% of running words within first 4,000 word families; Adapted from Hukumusume.com. (2012). Nusutto kozō. Retrieved from http://hukumusume.com/douwa/pc/jap/02/10.htm
永井隆 [Nagai Takashi]	98.1% of running words within first 4,000 word families; Adapted from Hashizume, A. (2015). Nagai Takashi: Genbaku no chi Nagasaki ni ikite. In Japanese Graded Readers Level 4 (Vol. 1). Japan: Ask Publishing.

Summary of Baseline Test Data Part II continued

日本の劇 [Nihon no geki]	99.2% of running words within first 4,000 word families; Adapted from Kyōgen to warai (Oka et al., 2009, pp. 180-181)
くまの貴方 [Kuma no Anata]	100% of running words within first 4,000 word families; Adapted from Kamisama [God] by Hiromi Kawakami.
お坊さんの話 [Obōsan no hanashi]	98.9% of running words within first 4,000 word families; Adapted from Hukumusume.com. (2012). Yoku wakarū sekkyō. Retrieved from http://hukumusume.com/douwa/pc/jap/02/14.htm
<u>Title</u>	<u>Notes</u>
男とネコ [Otoko to neko]	99.6% of running words within first 4,000 word families; Adapted from Hukumusume.com. (2012). Daiku to mikeneko. Retrieved from http://hukumusume.com/douwa/pc/jap/01/17a.htm

Summary of Baseline Test Data Part III

<u>Title</u>	<u>Words Not Included in J-Lex Analysis</u>	<u>Order</u>
マンガの神様：手塚治虫 [Manga no kamisama: Tedzuka Osamu]	アニメ、キャラクターグッズ、カルチャー、Jポップ、ファン、ストーリー、リクエスト	1.1
スポーツを通して学ぶ心 [Supōtsu o tōshite manabu kokoro]	サッカー、スキー、MLB、メジャーリーグ、ワールド、オリンピック、リアル（タイム）、バッター、バット、ピッチャー、グローブ、ロッカー	1.2
お弁当 [Obentō]	N/A	1.3
傘 [Kasa]	ハグ	1.4
まさかの話 [Masaka no hanashi]	吉四六	1.5
奈良の大きな仏の像 [Nara no ōkina hotoke no zō]	N/A	2.1
インスタントラーメン発明物語 [Insutantorāmen hatsumeimonogatari]	インスタントラーメン、ラーメン、ヌードル、チキンラーメン、ヒット、ヒント	2.2
日本の神話：天の岩戸 [Nihon no shinwa: Amanoiwato]	大神（天照大神）	2.3

Summary of Baseline Test Data Part III continued

写真 [Shashin]	N/A	2.4
自分の頭を食べたへび [Jibun no atama o tabeta hebi]	吉四六、クチナワ	2.5
三億円事件 [San'okuen jiken]	ボーナス、信託（日本信託銀行）、ダイナマイト、タイヤ	3.1
日本の地理 [Nihon no chiri]	四国、オーストラリア、静岡、ドーム、兵庫、白鷺、レジャー、 リラックス	3.2
<u>Title</u>	<u>Words Not Included in J-Lex Analysis</u>	<u>Order</u>
マスク [Masuku]	マスク、イブ（クリスマス・イブ）、ディスク・ジョッキー、 スクリプト、ストーブ（ガス・ストーブ）、カーボン（カーボン紙）	3.3
少女とシロクマ [Shōjo to shirokuma]	N/A	3.4
頭のいい彦一 [Atama no ī Hikoichi]	N/A	3.5
永井隆 [Nagai Takashi]	N/A	4.1
日本の劇 [Nihon no geki]	N/A	4.2
くまの貴方 [Kuma no Anata]	ハイキング、アスフォルト、レストハウス	4.3
お坊さんの話 [Obōsan no hanashi]	N/A	4.4
男とネコ [Otoko to neko]	神田	4.5

Summary of Intervention Test Data Part I

<u>Title</u>	<u>jReadability Level</u>	<u>98% Headword Level</u>	<u>Type</u>	<u>Genre</u>
ハチの話 [Hachi no hanashi]	Elementary	1,000	Non-fiction	Historical Narrative
日本へ行きたい！ [Nihon e ikitai!]	Elementary	1,000	Non-fiction	Informative Narrative
アリババと四十人の泥棒 [Ari baba to Yonjūnin no dorobō]	Elementary	1,285	Fiction	Short Story
お金がありません [Okane ga arimasen]	Elementary	1,285	Fiction	Short Story
ネズミの結婚 [Nezumi no kekkon]	Elementary	1,000	Fiction	Folk-tale
着物 [Kimono]	Elementary	1,285	Non-fiction	Historical Narrative
バナナは日本で一番 [Banana wa Nihon de ichiban]	Elementary	1,000	Non-fiction	Informative Narrative
穴 [Ana]	Elementary	1,285	Fiction	Short Story
大好きな時計 [Daisukina tokei]	Elementary	1,285	Fiction	Short Story
浦島太郎 [Urashima Tarō]	Elementary	1,000	Fiction	Folk-tale
すし [Sushi]	Elementary	1,285	Non-fiction	Historical/Informative Narrative
だるまさん [Daruma-san]	Elementary	1,285	Non-fiction	Informative Narrative

Summary of Intervention Test Data Part I continued

<u>Title</u>	<u>jReadability Level</u>	<u>98% Headword Level</u>	<u>Type</u>	<u>Genre</u>
バス [Basu]	Elementary	1,000	Fiction	Short Story
ジョンさんの夏休み [Jon-san no natsuyasumi]	Elementary	1,000	Fiction	Short Story
鳥のプレゼント [Tori no purezento]	Elementary	1,000	Fiction	Folk-tale
お風呂屋さん [Ofuoyasan]	Elementary	1,000	Non-fiction	Historical/Informative Narrative
ラッキーな猫 [Rakkīna neko]	Elementary	1,285	Non-fiction	Historical/Informative Narrative
船 [Funē]	Elementary	1,000	Fiction	Short Story
ロボット D 太の日記 [Robotto D-ta no nikki]	Elementary	1,285	Fiction	Short Story
どうしてねこ年がない？ [Dōshite neko-toshi ga nai?]	Elementary	1,000	Fiction	Folk-tale
二人の泥棒 [Futari no dorobō]	Elementary	1,285	Non-fiction	Historical Narrative
今日は何の日？2月 [Kyō wa nan no hi? 2 gatsu]	Elementary	1,000	Non-fiction	Informative Narrative
太郎くんの夏休み [Tarō-kun no natsuyasumi]	Elementary	1,000	Fiction	Short Story
きれいじゃないアヒルの子 [Kirei janai ahiru no ko]	Elementary	1,000	Fiction	Children's Story
どうして海の水には塩がある？ [Dōshite umi no mizu ni wa shio ga aru?]	Elementary	1,000	Fiction	Folk-tale

Summary of Intervention Test Data Part I continued

南の島のタクシー [Minami no shima no takushī]	Elementary	1,000	Non-fiction	Experiential Narrative
<u>Title</u>	<u>jReadability Level</u>	<u>98% Headword Level</u>	<u>Type</u>	<u>Genre</u>
天王寺の動物 [Ten'nōji no dōbutsu]	Elementary	1,000	Non-fiction	Informative Narrative
アインさん アルバイトをする？ [Ain-san arubaito o suru?]	Elementary	1,285	Fiction	Short Story
ロボットのボッコちゃん [Robotto no bokko-chan]	Elementary	1,000	Fiction	Short Story
どうして蚊は人の血を吸う？ [Dōshite ka wa hito no chivosuu?]	Elementary	1,285	Fiction	Folk-tale
インドネシアが生まれた日 [Indoneshia ga umaretahi]	Elementary	1,285	Non-fiction	Historical/Informative Narrative
赤ちゃんポスト [Akachan posuto]	Elementary	1,285	Non-fiction	Informative Narrative
どうしてコウモリは昼、飛ばない？ [Dōshite kōmori wa hiru, tobanai?]	Elementary	1,285	Fiction	Tale
こどもの日 5月5日 [Kodomo no hi 5 gatsu 5 ka]	Elementary	1,285	Non-fiction	Informative Narrative
兄弟 [Kyōdai]	Elementary	1,285	Non-fiction	Historical Narrative
絵の上手な雪舟 [E no jōzuna Sesshū]	Elementary	1,285	Non-fiction/Fiction	Historical Description/Folk Tale

Summary of Intervention Test Data Part II

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
ハチの話 [Hachi no hanashi]	480	302	98.9% of running words within first 1,000 word families; Adapted from Matsuda, M. (2007). Hachi no hanashi. In Japanese Graded Readers Level 1 (Vol. 1). Japan: Ask Publishing.
日本へ行きたい！ [Nihon e ikitai!]	841	456	98.9% of running words within first 1,285 word families; Adapted from Dominguez, M. (n.d.). “Nihon e ikitai!” Kazoku no hanashi. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_1/Family_who_love_Japan_without_ruby_Level1.pdf
アリババと四十人の泥棒 [Ari baba to Yonjūnin no dorobō]	582	354	98.8% of running words within first 1,285 word families; Adapted from Hasebe, N. (2016). Alibaba to yonjūnin no tōzoku [Alibaba and the forty thieves] (Vol. 10). Tadoku Nihongo Gakushū Dokuhon. Retrieved from https://nihongotokuhon.jimdo.com/app/download/14020640424/%E3%82%A2%E3%83%AA%E3%83%90%E3%83%90%E3%81%A840%E4%BA%BA%E3%81%AE%E7%9B%97%E8%B3%8A%28%E3%82%AA%E3%83%AA%E3%82%B8%E3%83%8A%E3%83%AB%EF%BC%89.pdf?t=1488027079
お金がありません [Okane ga arimasen]	579	357	98.1% of running words within first 1,285 word families; Adapted from Yamazaki, T. (2007). Waraibanashi. In Japanese Graded Readers Level 1 (Vol. 1). Japan: Ask Publishing.
ネズミの結婚 [Nezumi no kekkon]	580	331	100% of running words within first 1,285 word families; Adapted from Hukumusume.com. (2012). Nezumi no yomeiri. Retrieved from http://hukumusume.com/douwa/pc/jap/02/15.htm

Summary of Intervention Test Data Part II continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
着物 [Kimono]	525	331	98.2% of running words within first 1,285 word families; Adapted from Kawamoto, K. (2017). Kimono. In Japanese Graded Readers Level 1 (Vol. 3). Japan: Ask Publishing.
バナナは 日本で一 番 [Banana wa Nihon de ichiban]	599	321	99.3% of running words within first 1,000 word families; Adapted from de Bella, L., & Nakagoshi, N. (2018). Banana wa nihon'ichi. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_1/Banana_Level1.pdf
穴 [Ana]	711	460	100% of running words within first 1,285 word families; Adapted from O-i deteko-i [Can anyone hear me?] by Shinichi Hoshi
大好きな 時計 [Daisukina tokei]	570	339	98.6% of running words within first 1,285 word families; Adapted from Aiyō no tokei by Shinichi Hoshi
浦島太郎 [Urashima Tarō]	858	538	99.8% of running words within first 1,000 word families; Adapted from Makiko, A. (2007). Urashima Tarō. In Japanese Graded Readers Level 1 (Vol. 1). Japan: Ask Publishing.
すし [Sushi]	580	355	98.2% of running words within first 1,285 word families; Adapted from Awano, M. (2008). Sushi/Sushi/Sushi. In Japanese Graded Readers Level 1 (Vol. 2). Japan: Ask Publishing.
だるま さん [Daruma- san]	609	366	98% of running words within first 1,285 word families; Adapted from Tabata-Sandom, M. (n.d.). Daruma-san. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Japanese_Doll_Darma_with_ruby_level2.pdf

Summary of Intervention Test Data Part II continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
バス [Basu]	851	475	98.4% of running words within first 1,285 word families; Adapted from Matsuda, M. (2017). Basu [Bus]. In Japanese Graded Readers Level 1 (Vol. 3). Japan: Ask Publishing.
ジョンさんの夏休み [Jon-san no natsuyasumi]	608	334	98.2% of running words within first 1,000 word families; Adapted from Kawamoto, K. (2017). Jon-san no natsuyasumi [John's summer break]. In Japanese Graded Readers Level 1 (Vol. 3). Japan: Ask Publishing.
鳥のプレゼント [Tori no purezento]	979	545	98.3% of running words within first 1,000 word families; Adapted from Takahashi, S. (2017). Shita kiri suzume [Tongue-cut sparrow]. In Japanese Graded Readers Level 1 (Vol. 3). Japan: Ask Publishing.
お風呂屋さん [Ofuroyasan]	840	512	99.4% of running words within first 1,285 word families; Adapted from Tabata-Sandom, M. (n.d.). Ofuroyasan. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Public_bath_house_with_ruby.pdf
ラッキーな猫 [Rakkīna neko]	609	394	98.7% of running words within first 1,285 word families; Adapted from NPO Tadoku Supporters (2017). Manekineko. In Taishukan Japanese Readers Level 1 (Vol. 1). Japan: Taishukan Publishing.
船 [Fune]	750	482	98.1% of running words within first 1,000 word families; Adapted from Matsuda, M. (2017). Fune. In Taishukan Japanese Readers Level 1 (Vol. 1). Japan: Taishukan Publishing.

Summary of Intervention Test Data Part II continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
ロボット D太の日記 [Robotto D-ta no nikki]	557	323	98.7% of running words within first 1,285 word families; Adapted from Endō, K. (2017). Robotto D-ta: Nikki. In Taishukan Japanese Readers Level 1 (Vol. 8). Japan: Taishukan Publishing.
どうして ねこ年がない？ [Dōshite neko-toshi ga nai?]	786	501	98% of running words within first 1,000 word families; Adapted from Oda, M. (2017). Dōshite ebi no karada wa magatta? Dōshite neko-doshi ga nai? In Japanese Graded Readers Level 1 (Vol. 3). Japan: Ask Publishing.
二人の泥棒 [Futari no dorobō]	550	363	98% of running words within first 1,285 word families; Adapted from Kawamoto, K. (2007). Sekai no dokoka de Nihon no dokoka de ~hontōniatta hanashi~. In Japanese Graded Readers Level 4 (Vol. 2). Japan: Ask Publishing.
今日は何 の日？2月 [Kyō wa nan no hi? 2 gatsu]	698	397	98.4% of running words within first 1,000 word families; Adapted from Tabata-Sandom, M. (n.d.). Kyō wa nan no hi? 2 gatsu. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_1/Special_day_February_with_ruby.pdf
太郎く んの夏休 み [Tarō-kun no natsuyasumi]	612	353	98.9% of running words within first 1,000 word families; Adapted from Azuma, K., & Hatakenaka, T. (2015). Tarō-kun no natsuyasumi. KC Yomu Yomu Seisaku Iinkai. Retrieved from http://jfk.jp/clip/images/page/yomyom/001_taro.pdf
きれいじ ゃないア ヒルの子 [Kirei janai ahiru no ko]	700	404	99.7% of running words within first 1,000 word families; Adapted from Miyagi, E. (2017). Minikui ahiru no ko [The Ugly Duckling]. In Taishukan Japanese Readers Level 1 (Vol. 8). Japan: Taishukan Publishing.

Summary of Intervention Test Data Part II continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
どうして海の水には塩がある？ [Dōshite umi no mizu ni wa shio ga aru?]	821	526	98.2% of running words within first 1,000 word families; Adapted from Nakayama, T. (2014). Dōshite umi no mizu wa shio karai?. In Japanese Graded Readers Level 1. Japan: NPO Tadoku Supporters.
南の島のタクシー [Minami no shima no takushī]	778	448	99.8% of running words within first 1,000 word families; Adapted from Tanigawa, Y. (2017). Minami no shima no takushī. In Taishukan Japanese Readers Level 1 (Vol. 8). Japan: Taishukan Publishing.
天王寺の動物 [Ten'nōji no dōbutsu]	568	315	99.7% of running words within first 1,000 word families; Adapted from Adachi, S. (2015). Ten'nōji dōbutsuen. KC Yomu Yomu Seisaku Iinkai. Retrieved from http://jfk.jp/clip/images/page/yomyom/004_tennoji.pdf
アインさん アルバイトをする？ [Ain-san arubaito o suru?]	685	333	99.1% of running words within first 1,285 word families; Adapted from Ōnishi, K. (2017). Ain-san arubaito o suru?. KC Yomu Yomu Seisaku Iinkai. Retrieved from http://jfk.jp/clip/images/page/yomyom/027_anhsanarbeitsosuru.pdf
ロボットのボッコちゃん [Robotto no bokko-chan]	1,036	575	99.3% of running words within first 1,000 word families; Adapted from Bokko-chan by Shinichi Hoshi

Summary of Intervention Test Data Part II continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
どうして蚊は人の血を吸う？ [Dōshite ka wa hito no chiwosuu?]	701	453	99.1% of running words within first 1,000 word families; Adapted from Sakuta, N. (2017). Dōshite ka wa hito no chi wo suu?. In Taishukan Japanese Readers Level 1 (Vol. 8). Japan: Taishukan Publishing.
インドネシアが生まれた日 [Indonesia ga umaretahi]	623	339	98.4% of running words within first 1,285 word families; Adapted from Shērudi, Yuyudo E. A. P. (n.d.). Indonesia omedetō no hi. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_1/Indonesian_birthday_level_1.pdf
赤ちゃんポスト [Akachan posuto]	612	352	99.7% of running words within first 1,285 word families; Adapted from Tabata-Sandom, M. (n.d.). Akachan posuto. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatsum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_3/Baby_post_with_ruby_revised.pdf
どうしてコウモリは昼、飛ばない？ [Dōshite kōmori wa hiru, tobanai?]	774	460	99.3% of running words within first 1,285 word families; Adapted from Ishikawa, T. (2014). Dōshite kōmori wa hiru, tobanai?. In Japanese Graded Readers Level 1. Japan: NPO Tadoku Supporters.

Summary of Intervention Test Data Part II continued

<u>Title</u>	<u>Character Count</u>	<u>Word Count</u>	<u>Notes</u>
こどもの 日 5月 5日 [Kodomo no hi 5 gatsu 5 ka]	518	306	99.3% of running words within first 1,285 word families; Original.
兄弟 [Kyōdai]	830	496	98% of running words within first 1,285 word families; Adapted from Morishita, S. (n.d.). Tsuwamonodomo ga yume no ato. Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_3/Tsuwamonodomo_Level3.pdf
絵の上手 な雪舟 [E no jōzuna Sesshū]	713	446	98% of running words within first 1,285 word families; Adapted from Morishita, S. (n.d.). Suki koso.....? Yomimono Ippai. Retrieved from http://www17408ui.sakura.ne.jp/tatum/project/Yomimono/Yomimono-ippai/yomimono/PDF_level_2/Sesshū_Level2_with-ruby.pdf

Summary of Intervention Test Data Part III

<u>Title</u>	<u>Words Not Included in J-Lex Analysis</u>
ハチの話 [Hachi no hanashi]	ハチ、渋谷
日本へ行きたい！ [Nihon e ikitai!]	日本、ディズニー・ワールド、マナー、ハローキティ、バッグ、ケース、チケット、テーマパーク、パフォーマンス、ヌードル、インスタント、スープ、スタッフ、ユニバーサル・スタジオ・ジャパン、スーパーマリオワールド

Summary of Intervention Test Data Part III continued

アリババと四十人の泥棒 [Ari baba to Yonjūnin no dorobō]	リーダー
<u>Title</u>	<u>Words Not Included in J-Lex Analysis</u>
お金がありません [Okane ga arimasen]	N/A
ネズミの結婚 [Nezumi no kekkon]	ネズミ (All participants knew 'mouse')、チューコ
着物 [Kimono]	日本、平安 (時代)、ヨーロッパ
バナナは日本で一番 [Banana wa Nihon de ichiban]	バナナ、日本、オレンジ、ランキング、トン、フィリピン、台湾、ジャイアント
穴 [Ana]	穴 (All participants knew 'hole')、ダメージ、ビジネスマン、ドキュメント
大好きな時計 [Daisukina tokei]	N/A
浦島太郎 [Urashima Tarō]	太郎、亀 (All participants knew 'turtle')、竜宮城
すし [Sushi]	すし、日本、中国、江戸、東京、大阪、デザート
だるまさん [Daruma-san]	だるま、日本、モデル、達磨、インド、中国、群馬、マーケット
バス [Basu]	トラック、ブレーキ
ジョンさんの夏休み [Jon-san no natsuyasumi]	仙台、ホームステイ、東京、ビール、ジュース
鳥のプレゼント [Tori no purezento]	N/A
お風呂屋さん [Ofuroyasan]	お風呂屋さん (All participants knew 'bath house')、スパ、江戸、東京、オレンジ、日本、マッサージ

Summary of Intervention Test Data Part III continued

<u>Title</u>	<u>Words Not Included in J-Lex Analysis</u>
ラッキーな猫 [Rakkīna neko]	ラッキー、日本、招き猫 (All participants knew 'welcoming cat'), 江戸、東京、たま (name)
船 [Fune]	さくら丸 (name)、ヘリコプター
ロボット D 太の日記 [Robotto D-ta no nikki]	ロボット、D (D 太の名前)、ゲーム、CD
どうしてねこ年がない？ [Dōshite neko-toshi ga nai?]	ねずみ (All participants knew 'mouse')、うし (All participants knew 'cow')
二人の泥棒 [Futari no dorobō]	日本、センチ、ケース、ステレオ
今日は何の日？2月 [Kyō wa nan no hi? 2 gatsu]	節分、イベント、江戸、日本、(バレンタイン) デー、カップル、チョコレート、本命チョコ、義理チョコ、友チョコ、東京スカイツリー、うるう年、スカイツリー、富士 (山)
太郎くんの夏休み [Tarō-kun no natsuyasumi]	太郎、アイスクリーム、ゲーム
きれいじゃないアヒルの子 [Kirei janai ahiru no ko]	アヒル (All participants knew 'duck')
どうして海の水には塩がある？ [Dōshite umi no mizu ni wa shio ga aru?]	N/A
南の島のタクシー [Minami no shima no takushī]	日本、チーバン (name)、トランク、ドル、バナナ
天王寺の動物 [Ten'nōji no dōbutsu]	日本、東京、大阪、ライオン、コアラ、キーウイ、ニュージーランド、ペンギン、ピクニック
アインさん アルバイトをする？ [Ain-san arubaito o suru?]	日本、ベトナム、アニメ
ロボットのボッコちゃん [Robotto no bokko-chan]	ロボット、ボッコ (name)、バー、マスター、ビール、デート、グラス
どうして蚊は人の血を吸う？ [Dōshite ka wa hito no chiwosuu?]	蚊 (All participants knew 'mosquito')、ベトナム

Summary of Intervention Test Data Part III continued

<u>Title</u>	<u>Words Not Included in J-Lex Analysis</u>
インドネシアが生まれた日 [Indoneshia ga umaretahi]	インドネシア、ユユド (name)、日本、フィリピン、インド、ポルトガル、スペイン、フランス、イギリス、イベント、ゲーム、ダンス、イスラム、カトリック、プロテスタント、ヒンドゥー
赤ちゃんポスト [Akachan posuto]	ポスト、ベビー・ボックス、ドイツ、日本、熊本、レイプ
どうしてコウモリは昼、飛ばない？ [Dōshite kōmori wa hiru, tobanai?]	コウモリ (All participants knew 'bat')、ライオン
こどもの日 5月5日 [Kodomo no hi 5 gatsu 5 ka]	N/A
兄弟 [Kyōdai]	日本、グループ、頼朝、義経、リーダー
絵の上手な雪舟 [E no jōzuna Sesshū]	日本、インク、リーダー

Baseline Reading Test Sample

Title: 少女とシロクマ [Shōjo to shirokuma]

少女とシロクマ

少女とシロクマ
 しょうじょ
 ここは、冬が一年中続く北ロシアの小さな村です。ある日、小さな二匹のシロクマが村に来て、雪の上で遊んでいました。それを、少女が見つめていました。遠くから3人の男が村の方へ向かって来るのが見えました。その男たちがシロクマを獲る悪い人たちだということは見ただけですぐ分かりました。少女は小さなシロクマのところへ走って行き、隣に座りました。それを見た男たちは帰って行きました。

一年のうちで一番寒い時期になりました。この時期は仕事が特にたくさんありました。ところがある日、母親が病気になってしまいました。いつものように働くことができません。夜になるとさらに具合が悪くなりました。少女はなんとかして母親を助けようと思いました。夜中でしたが、すぐにお医者さんと呼ばなければなりません。お医者さんは町に住んでいます。町までの道は歩いて行くには遠く、夜中はとても危険でした。怖くなった少女は座りました。でも少女は何かしなければならぬということはいく分かっていました。

さあ、行きましょう。父親が家にいた時、父親といっしょにその町に行ったことはありましたが、一人では道がよく分かりません。星が道を教えてくれるといいな、と少女は思いました。しばらく暗い道を歩いていると、誰かが後ろにいるのを感じました。柔らかく雪を踏む足の音が聞こえます。少女が振り向くと、大きなシロクマが後ろを歩いていました。少女はもうこれで終わりだと思いました。シロクマはゆっくり近づいてきました。少女は急がなければなりませんでしたが、動けませんでした。少女は怖くて、両手で顔を覆って泣き始めました。シロクマはすぐそばに来て少女のコートに触りました。次の瞬間、少女は何か柔らかいものに乗せられてどこかに運ばれているように感じました。目を開けてみると、シロクマの上に乗せられていて、うえの町に向かっていることに気がつきました。シロクマはこの時期、お腹がすいているはずでしたが、少女を食べようとはしませんでした。二人はようやく町に着きました。そして、お医者さんの家に向かって走り出しました。数分後、少女はお医者さんといっしょに車に乗って村に帰って行きました。車の中から少女は外を見ましたが、シロクマはどこにもいませんでした。村に着くと、お医者さんは母親の具合をみて薬をくれました。母親はすっかり元気になりました。少女とシロクマは、お互いの一番大切なものを助けたのです。

Intervention Reading Test Sample

Title: ロボット D 太の日記 [Robotto D-ta no nikki]

ロボット D 太の日記

男の子の名前は、勇介です。勇介はゲームが好きです。勇介はおじいちゃんからロボットを
おとこ こ なまえ ゆうすけ ゆうすけ す ゆうすけ
 もらいました。ロボットの名前は、D太です。D太はテレビが好きです。

お母さんが来ました。「勇介、宿題は？」
かあ き なまえ た た す
ゆうすけ しゅくだい

「まだ……」

「早くしなさい！」

はや

「はいっ！」

勇介は宿題を始めました。今日の宿題は日記です。八時半です。でも、まだ終わりません。
ゆうすけ しゅくだい はじ きょう しゅくだい にっき はちじはん お
 勇介は日記が嫌いです。
ゆうすけ にっき きら

D太は聞きました。「日記はおもしろいですか？」

「おもしろくな……う、うん、とってもおもしろいよ。ぼく、日記大好き！」
た き なまえ にっき
にっき だいす

「そうですか」

「D太も日記、書きたい？」

た にっき か

「はい！」

でも、D太は字がわかりません。D太は困りました。「勇介さん、ごめんなさい。私は字が
た じ わたし た こま ゆうすけ わたし じ
 わかりませんから、日記が書けません」
にっき か

次の日、D太は勇介のおじいちゃんのうちへ行きました。おじいちゃんが言いました。「D太、
つぎ ひ た ゆうすけ い い た
 元気か？」
げんき

「はい、元気です。おじいちゃん、今日はお願ひがあります。」

「何？お願ひ？」

「私は字が書けません。でも、日記が書きたいです……」
わたし じ か にっき か

おじいちゃんと言いました。「大丈夫。私に任せなさい！」おじいちゃんは D太の頭に、
い だいじょうぶ わたし まか た あたま
 ひらがなの CD を入れました。それから、カタカナの CD を入れました。そして、漢字の CD を
い い かんじ
 入れました。D太は本を読みました。おじいちゃんは聞きました。「どうだ？」
い た ほん よ き

「はい。わかります！」

それから、D太は紙に字を書きました。D太は言いました。「ありがとうございます。私は
た かみ じ か た い わたし
 今日から日記を書きます！」
きょう にっき か

夜、D太はテレビを見ました。勇介はゲームをします。

お母さんが来ました。「しゅくだい！」
かあ き

そして、勇介と D太は日記を書きました。
ゆうすけ た にっき か

Reading Tests: Comprehension Discussion Grading Rubric

This grading rubric has been adapted from Padak and Rasinski (2005).

Reading comprehension is the ability to demonstrate understanding of what is read.

How to assess reading comprehension

After the learner has read the passage, remove the passage from their view. Then

- 1) Ask for a retelling of what they remember.
- 2) Next, ask if there is anything else they can recall from the passage. If they are unable or unwilling to retell anything, probe for specific information.

Example Probe Questions

- What was the passage about?
- What was the main idea of the story?
- Who or what was (were) the main character(s)? Who was the passage about?
- Where did the story/passage occur?
- When did the story/passage occur? What was the occasion for the narrative?
- How did the passage flow? How did _____ happen?

When the learner has told you as much as they can remember or articulate from the passage, rate the recall using the following comprehension rubric.

Reading Comprehension Rubric

Score of 1: Learner demonstrates no recall or minimal recall of only a fact or two from the passage

Score of 2: Learner recalls a number of unrelated facts of varied importance

Score of 3: Learner recalls the main ideas of the passage with a few supporting details

Score of 4: Learner recalls the main idea along with a fairly robust set of supporting details, although not necessarily organized logically or sequentially as presented in the passage

Score of 5: Learner recall is a comprehensive summary of the passage, presented in a logical order and/or with a robust set of details, and includes a statement of main idea. Student may also make connections beyond the text to their personal life, another text, etc.

APPENDIX F. READING TEST COMPREHENSION SCORES

Participants' Individual Test Comprehension Scores

Aiden's Comprehension Scores

Order	Test	Title	Score
1	B1-1	マンガの神様：手塚治虫	3
2	B1-2	スポーツを通して学ぶ心	5
3	B1-3	お弁当	4
4	B1-4	傘	3
5	B1-5	まさかの話	5
6	I1-1	日本へ行きたい！	5
7	I1-2	お金がありません	5
8	I1-3	浦島太郎	5
9	I1-4	アリババと四十人の泥棒	5
10	I1-5	絵の上手な雪舟	5
11	I1-6	兄弟 v5	5
12	I1-7	バナナは日本で一番	5
13	I1-8	穴 v4	5
14	I1-9	大好きな時計 v2	5
15	I1-10	ネズミの結婚	5
16	I1-11	だるまん v2	3
17	I1-12	着物 v2	5
18	I1-13	バス	4
19	I1-14	ジョンさんの夏休み	5
20	I1-15	鳥のプレゼント	4
21	I1-16	お風呂屋さん	4
22	B2-1	奈良の大きな仏の像	4
23	B2-2	インスタントラーメン発明物語	5
24	B2-3	日本の神話：天の岩戸	5
25	B2-4	写真	2
26	B2-5	自分の頭を食べたへビ	5
27	I2-1	ラッキーな猫	5
28	I2-2	今日は何の日？2月	4
29	I2-3	太郎くんの夏休み	5
30	I2-4	ロボット D 太の日記	5
31	I2-5	どうしてねこ年がない？	5

Aiden's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
32	I2-6	二人の泥棒	4
33	I2-7	すし v2	5
34	I2-8	船	5
35	B3-1	三億円事件	5
36	B3-2	日本の地理	4
37	B3-3	マスク	3
38	B3-4	少女とシロクマ	5
39	B3-5	頭のいい彦一	5
40	I3-1	きれいじゃないアヒルの子	5
41	I3-2	どうして海の水には塩がある？	5
42	I3-3	南の島のタクシー	5
43	I3-4	天王寺の動物	5
44	I3-5	アインさん アルバイトをする？	5

Alexander's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	4
2	B1-2	スポーツを通して学ぶ心	4
3	B1-3	お弁当	5
4	B1-4	傘	5
5	B1-5	まさかの話	4
6	I1-1	兵の兄弟	3
7	I1-2	だるまさん	5
8	I1-3	穴	5
9	I1-4	大好きな時計	5
10	I1-5	浦島太郎	5
11	I1-6	ハチの話	5
12	I1-7	日本へ行きたい！ V2	5
13	I1-8	アリババと四十人の泥棒	4
14	I1-9	お金がありません	5
15	I1-10	ネズミの結婚	5
16	I1-11	着物 v2	5
17	I1-12	バナナは日本で一番	4
18	I1-13	バス	4
19	I1-14	ジョンさんの夏休み	5

Alexander's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
20	I1-15	鳥のプレゼント	5
21	I1-16	すし v2	4
22	I1-17	お風呂屋さん	5
23	B2-1	奈良の大きな仏の像	3
24	B2-2	インスタントラーメン発明物語	3
25	B2-3	日本の神話：天の岩戸	5
26	B2-4	写真	3
27	B2-5	自分の頭を食べたヘビ	5
28	I2-1	ラッキーな猫	1
29	I2-2	今日は何の日？2月	4
30	I2-3	船	5
31	I2-4	ロボット D 太の日記	5
32	I2-5	どうしてねこ年がない？	5
33	I2-6	二人の泥棒	5
34	I2-7	南の島のタクシー	5
35	I2-8	太郎くんの夏休み	4
36	B3-1	三億円事件	4
37	B3-2	日本の地理	4
38	B3-3	マスク	2
39	B3-4	少女とシロクマ	5
40	B3-5	頭のいい彦一	5
41	I3-1	きれいじゃないアヒルの子	4
42	I3-2	どうして海の水には塩がある？	4
43	I3-3	インドネシアが生まれた日	5
44	I3-4	天王寺の動物	5
45	I3-5	アインさん アルバイトをする？	5

Amber's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	5
2	B1-2	スポーツを通して学ぶ心	4
3	B1-3	お弁当	5
4	B1-4	傘	5
5	B1-5	まさかの話	5

Amber's Comprehension Scores (continued)

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
6	I1-1	だるまさん	5
7	I1-2	穴	5
8	I1-3	兵の兄弟	5
9	I1-4	大好きな時計	5
10	I1-5	浦島太郎	5
11	I1-6	ハチの話	5
12	I1-7	日本へ行きたい!	5
13	I1-8	アリババと四十人の泥棒	5
14	I1-9	お金がありません	5
15	I1-10	ネズミの結婚	5
16	I1-11	絵の上手な雪舟	5
17	I1-12	バナナは日本で一番	5
18	B2-1	奈良の大きな仏の像	4
19	B2-2	インスタントラーメン発明物語	5
20	B2-3	日本の神話：天の岩戸	5
21	B2-4	写真	3
22	B2-5	自分の頭を食べたへビ	5
23	I2-1	バス	5
24	I2-2	鳥のプレゼント	5
25	I2-3	着物 v2	5
26	I2-4	お風呂屋さん	5
27	I2-5	すし	5
28	B3-1	三億円事件	5
29	B3-2	日本の地理	5
30	B3-3	マスク	4
31	B3-4	少女とシロクマ	5
32	B3-5	頭のいい彦一	5
33	I3-1	ジョンさんの夏休み	5
34	I3-2	ラッキーな猫	5
35	I3-3	今日は何の日? 2月	5
36	I3-4	どうしてねこ年がない?	5
37	I3-5	どうして海の水には塩がある?	5
38	I3-6	南の島のタクシー	5
39	I3-7	天王寺の動物	5
40	I3-8	船	5

Amber's Comprehension Scores (continued)

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
41	I3-9	きれいじゃないアヒルの子	5
42	I3-10	どうして蚊は人の血を吸う？	5
43	B4-1	永井隆	5
44	B4-2	日本の劇	5
45	B4-3	くまの貴方	4
46	B4-4	お坊さんの話	4
47	B4-5	男とネコ	5
48	I4-1	インドネシアが生まれた日	5
49	I4-2	赤ちゃんポスト	5
50	I4-3	ロボット D 太の日記	5
51	I4-4	アインさん アルバイトをする？	5
52	I4-5	どうしてコウモリは昼、飛ばない？	5

Bruce's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	3
2	B1-2	スポーツを通して学ぶ心	4
3	B1-3	お弁当	2
4	B1-4	傘	2
5	B1-5	まさかの話	3
6	I1-1	大好きな時計	4
7	I1-2	浦島太郎	3
8	I1-3	ハチの話	5
9	I1-4	日本へ行きたい！	3
10	I1-5	アリババと四十人の泥棒	5
11	I1-6	お金がありません	5
12	I1-7	ネズミの結婚	4
13	I1-8	絵の上手な雪舟	5
14	I1-9	だるまさん v2	4
15	I1-10	穴 v4	5
16	I1-11	兄弟 v5	4
17	I1-12	バス	2
18	I1-13	ジョンさんの夏休み	5
19	I1-14	鳥のプレゼント	5
20	I1-15	お風呂屋さん	4

Bruce's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
21	I1-16	着物 v2	5
22	I1-17	どうしてねこ年がない？	5
23	I1-18	ラッキーな猫	5
24	I1-19	船	4
25	I1-20	ロボット D 太の日記	5
26	I1-21	今日は何の日？2月	5
27	I1-22	二人の泥棒	5
28	I1-23	太郎の夏休み	5
29	B2-1	奈良の大きな仏の像	3
30	B2-2	インスタントラーメン発明物語	4
31	B2-3	日本の神話：天の岩戸	4
32	B2-4	写真	1
33	B2-5	自分の頭を食べたへび	5
34	I2-1	南の島のタクシー	3
35	I2-2	天王寺の動物	5
36	I2-3	きれいじゃないアヒルの子	5
37	I2-4	アインさん アルバイトをする？	5
38	I2-5	どうして海の水には塩がある？	5
39	I2-6	赤ちゃんポスト	5
40	I2-7	インドネシアが生まれた日	5

Caden's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	3
2	B1-2	スポーツを通して学ぶ心	3
3	B1-3	お弁当	3
4	B1-4	傘	2
5	B1-5	まさかの話	5
6	I1-1	ハチの話	5
7	I1-2	日本へ行きたい！ v2	5
8	I1-3	アリババと四十人の泥棒	5
9	I1-4	お金がありません	5
10	I1-5	ネズミの結婚	5
11	I1-6	着物 v2	4
12	I1-7	バナナは日本で一番	5
13	I1-8	穴 v4	5

Caden's Comprehension Scores (continued)

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
14	I1-9	大好きな時計 v2	4
15	I1-10	浦島太郎	5
16	I1-11	お風呂屋さん	5
17	B2-1	奈良の大きな仏の像	4
18	B2-2	インスタントラーメン発明物語	5
19	B2-3	日本の神話：天の岩戸	5
20	B2-4	写真	3
21	B2-5	自分の頭を食べたヘビ	5
22	I2-1	だるまさん v2	5
23	I2-2	バス	5
24	I2-3	ジョンさんの夏休み	4
25	I2-4	鳥のプレゼント	5
26	I2-5	すし v2	5
27	I2-6	ラッキーな猫	4
28	B3-1	三億円事件	5
29	B3-2	日本の地理	5
30	B3-3	マスク	3
31	B3-4	少女とシロクマ	5
32	B3-5	頭のいい彦一	4
33	I3-1	ロボット D 太の日記	4
34	I3-2	船	5
35	I3-3	どうしてねこ年がない？	5
36	I3-4	二人の泥棒	4
37	I3-5	今日は何の日？2月	5
38	I3-6	太郎くんの夏休み	4
39	I3-7	どうして海の水には塩がある？	5
40	I3-8	きれいじゃないアヒルの子	5
41	I3-9	南の島のタクシー	4
42	I3-10	天王寺の動物	5

Liam's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	4
2	B1-2	スポーツを通して学ぶ心	3

Liam's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
3	B1-3	お弁当	1
4	B1-4	傘	2
5	B1-5	まさかの話	3
6	I1-1	ハチの話	5
7	I1-2	お金がありません	3
8	I1-3	浦島太郎	5
9	I1-4	日本へ行きたい!	5
10	I1-5	アリババと四十人の泥棒	4
11	I1-6	絵の上手な雪舟	5
12	I1-7	だるまん v2	4
13	I1-8	穴 v4	5
14	I1-9	大好きな時計 v2	5
15	I1-10	ネズミの結婚	5
16	I1-11	着物	4
17	I1-12	バス	3
18	I1-13	お風呂屋さん	4
19	I1-14	ジョンさんの夏休み	4
20	I1-15	鳥のプレゼント	5
21	I1-16	すし	4
22	I1-17	ラッキーな猫	5
23	I1-18	船	4
24	B2-1	奈良の大きな仏の像	4
25	B2-2	インスタントラーメン発明物語	5
26	B2-3	日本の神話：天の岩戸	5
27	B2-4	写真	2
28	B2-5	自分の頭を食べたへび	1
29	I2-1	ロボット D 太の日記	5
30	I2-2	どうしてねこ年がない?	5
31	I2-3	二人の泥棒	5
32	I2-4	今日は何の日? 2月	5
33	I2-5	太郎くんの夏休み	3
34	I2-6	どうして海の水には塩がある?	5
35	I2-7	きれいじゃないアヒルの子	4
36	B3-1	三億円事件	5
37	B3-2	日本の地理	5

Liam's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
38	B3-3	マスク	3
39	B3-4	少女とシロクマ	4
40	B3-5	頭のいい彦一	4
41	I3-1	南の島のタクシー	3
42	I3-2	天王寺の動物	5
43	I3-3	アインさん アルバイトをする？	5
44	I3-4	ロボットのボッコちゃん	5
45	I3-5	どうして蚊は人の血を吸う？	5
46	I3-6	インドネシアが生まれた日	5
47	I3-7	こどもの日 5月5日	5
48	I3-8	どうしてコウモリは昼、飛ばない？	5

Noah's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	1
2	B1-2	スポーツを通して学ぶ心	1
3	B1-3	お弁当	1
4	B1-4	傘	1
5	B1-5	まさかの話	1
6	I1-1	ハチの話	5
7	I1-2	日本へ行きたい！ v2	3
8	I1-3	アリババと四十人の泥棒	5
9	I1-4	お金がありません	5
10	I1-5	ネズミの結婚	4
11	I1-6	着物 v2	4
12	I1-7	ラッキーな猫	5
13	I1-8	バス	5
14	I1-9	ジョンさんの夏休み	5
15	I1-10	浦島太郎	5
16	I1-11	すし v2	5
17	I1-12	だるまさん v2	4
18	B2-1	奈良の大きな仏の像	4
19	B2-2	インスタントラーメン発明物語	2
20	B2-3	日本の神話：天の岩戸	3
21	B2-4	写真	2

Noah's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
22	B2-5	自分の頭を食べたへビ	3
23	I2-1	船	3
24	I2-2	ロボット D 太の日記	5
25	I2-3	鳥のプレゼント	5
26	I2-4	お風呂屋さん	5
27	I2-5	バナナは日本で一番	5

Sophia's Comprehension Scores

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
1	B1-1	マンガの神様：手塚治虫	2
2	B1-2	スポーツを通して学ぶ心	4
3	B1-3	お弁当	2
4	B1-4	傘	3
5	B1-5	まさかの話	2
6	I1-1	ハチの話	5
7	I1-2	日本へ行きたい！ v2	5
8	I1-3	アリババと四十人の泥棒	4
9	I1-4	お金がありません	5
10	I1-5	ネズミの結婚	3
11	I1-6	着物 v2	5
12	I1-7	バナナは日本で一番	5
13	I1-8	穴 v4	4
14	I1-9	大好きな時計 v2	3
15	I1-10	浦島太郎	5
16	I1-11	すし v2	4
17	I1-12	だるまさん v2	5
18	I1-13	バス	4
19	B2-1	奈良の大きな仏の像	4
20	B2-2	インスタントラーメン発明物語	5
21	B2-3	日本の神話：天の岩戸	4
22	B2-4	写真	3
23	B2-5	自分の頭を食べたへビ	4
24	I2-1	ジョンさんの夏休み	5
25	I2-2	鳥のプレゼント	5
26	I2-3	お風呂屋さん	4
27	I2-4	ラッキーな猫	4

Sophia's Comprehension Scores continued

<u>Order</u>	<u>Test</u>	<u>Title</u>	<u>Score</u>
28	I2-5	船	3
29	B3-1	三億円事件	4
30	B3-2	日本の地理	5
31	B3-3	マスク	4
32	B3-4	少女とシロクマ	5
33	B3-5	頭のいい彦一	5
34	I3-1	ロボットD太の日記	3
35	I3-2	どうしてねこ年がない？	5
36	I3-3	二人の泥棒	5
37	I3-4	天王寺の動物	5
38	I3-5	アインさん アルバイトをする？	5

VITA

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Education

- Ph.D.** Applied Linguistics/Foreign Language Acquisition, Purdue University, 2019
 Concentration: Japanese
 Research Area: Japanese Pedagogy and Linguistics
 Dissertation Title: The Effects of Extensive Reading on Reading Rate Among
 Intermediate-level Learners of Japanese as a Foreign Language
 Chairs: Dr. Atsushi Fukada and Dr. Mariko Moroishi Wei
- M.A.** Second Language Teaching, Brigham Young University, 2016
 Language of Specialization: Japanese
 Thesis Title: Incidental Learning of Japanese Through Reading
 Online, in Print, and in Digital Games
 Chair: Dr. Rob Martinsen
- B.S.** Management, Brigham Young University, 2012
 Minor: Japanese
- A.S.** General Academics, Utah Valley University, 2007

Research Experience

- Principal Investigator**, Ph.D. Dissertation, Purdue University, 2016-2019
- Principal Investigator**, Co-investigator, Multiple Articles, Purdue University, 2016-2019
- Research Assistant, Japanese Educational Video Producer**,
 School of Languages and Cultures, Purdue University, January 2018-December 2019
 Research Professors: Atsushi Fukada & Kazumi Hatasa
- Principal Investigator**, M.A. Thesis, Brigham Young University, 2014-2016

Research Assistant, Department of Linguistics and English Language,
Brigham Young University, August 8, 2014-April 22, 2016
Research Professor: Dan Dewey

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Center for Language Studies, Brigham Young University, Spring 2015
Research Professor: Michael Bush

Completed Research Projects

1. **Peterson, J.** *Improving Japanese pronunciation: Implementation of an experimental pitch accent training regimen*. Manuscript submitted for publication, West Lafayette, IN.
2. **Peterson, J.** *Oral proficiency in online and face-to-face courses*. Manuscript submitted for publication, West Lafayette, IN.
3. **Peterson, J.** (2019). *The effects of extensive reading on reading rate among intermediate-level learners of Japanese as a foreign language* (Doctoral dissertation, Purdue University). Retrieved from Purdue University e-Pubs.
4. Henrichsen, L., **Peterson, J.**, Blanco, K. D., Carreño, S., Carter, S., Decker, L., ... Zhao, K. (2018). Online resources for learners and teachers of English language pronunciation. *TESL Reporter*, 51(1), 23–89.
5. **Peterson, J.** (2018). A Japanese pitch accent practice program and L1 influence on pitch accent acquisition. In *Proceedings of the Linguistic Society of America* (Vol. 3, p. 1:1–12). Salt Lake City, UT: Linguistics Society of America.
<http://dx.doi.org/10.3765/plsa.v3i1.4276>
6. **Peterson, J.** (2017). Nihon-go no goi, bunnō, kanji, oyobi bunka ni kansuru chishiki no gūhatsu-teki gakushū: Kami-baitai kyōzai, onrain kyōzai, dejitaru gēmu no hikaku [Incidental learning of Japanese vocabulary, grammar, kanji, and culture through reading online, in print, and in digital games]. In *The Proceedings of The 7th International Conference on Computer Assisted Systems for Teaching & Learning Japanese (CASTEL/J)* (pp. 289–303). Tokyo: Waseda University.
7. **Peterson, J.** (2016). *Incidental learning of Japanese through reading online, in print, and in digital games* (Master's thesis, Brigham Young University). Retrieved from BYU ScholarsArchive. (Paper 5799)

Research Projects in Progress

Peterson, J. (design and data extraction). *Taking the angō out of kango: A comparison of Sino-Japanese verbal usage among native and non-native speakers of Japanese.* This study will use a corpus approach to analyze the degree and type of Sino-Japanese verbals that Chinese, Korean, and English L1 learners use compared to each other as well as to native Japanese speakers.

Peterson, J. (design) *A ruby in the rough: The effect of phonetic glosses on lexical inferencing of logographs among English L1 learners.* A look at how furigana and pop-up dictionary use may assist learners in inferencing meaning of unknown kanji words.

Peterson, J. (design) *Vocabulary coverage in Japanese language textbooks: How representative is it?* The goal of this paper is to determine how well Japanese language textbooks do in terms of including realistic, frequency-based vocabulary.

Peterson, J. (design) *Language variation in video games.* A corpus-based investigation into the range of terms used to indicate player well-being within digital video games.

Peterson, J. (design). *An analysis of furigana usage from 1904-2011.* Using stories from Aozora Bunko, this study will show how the number of furigana used in printed text has changed over the last century.

Peterson, J., Peterson, R. (Alpha build). *Reading Fluency Solutions.* The development and effect of a web application for the recording and tracking of L2 reading fluency.

Professional Activities

Invited Addresses

1. **Peterson, J.** (2019, July). *Jesuchā ya bodīrangēji: Nihongo onrainkōsu no kikaku ni tsuite [Gestures and body language: A plan for an online Japanese language course].* **Invited presentation** given for The Japan Foundation Japanese-Language Institute, Kansai, Osaka, Japan.
2. **Peterson, J.** (2019, February). *Oral proficiency engendered through online and face-to-face instruction in novice-level learners of Japanese as a foreign language.* **Invited presentation** given at University of Rhode Island Modern and Classical Languages and Literatures Department Meeting, Kingston, RI.

Professional Conference Presentations

3. **Peterson, J.** (2019, March). *A comparison of oral proficiency engendered through online and face-to-face courses among novice-level Japanese as a foreign language learners.* Paper presented at the 2019 American Association of Teachers of Japanese (AATJ) Annual Spring Conference, Denver, CO.
4. **Peterson, J.** (2019, February). *Reading for pleasure: Incorporating extensive reading into your Japanese language courses.* Paper presented at the Utah Foreign Language Association's 104th Annual Conference, Ogden, UT.
5. Henrichsen, L., **Peterson, J.**, Balci, L. F., Carreño, S., Carter, S., Decker, L., ... Zhao, K. (2018, March). *Online resources for learners and teachers of English pronunciation.* Poster presented at the TESOL 2018 Conference, Chicago, IL.
6. **Peterson, J.** (2018, March). *Improving L2 pronunciation using a digital Japanese pitch accent practice program.* Paper presented at the American Association for Applied Linguistics 2018 Conference, Chicago, IL.
7. **Peterson, J.**, & Peterson, R. (2018, February). *Reading Fluency Solutions: Programming for reading.* Paper presented at the Utah Foreign Language Association's 103rd Annual Conference, Ogden, UT. Retrieved from <https://doi.org/10.13140/RG.2.2.35824.76803>
8. **Peterson, J.** (2018, January). *A Japanese pitch accent practice program and L1 influence on pitch accent acquisition.* Poster presented at The 92nd Annual Meeting of the Linguistic Society of America, Salt Lake City, UT. Retrieved from <https://doi.org/10.13140/RG.2.2.29952.74242>
9. Henrichsen, L., **Peterson, J.**, Balci, L. F., Carreño, S., Carter, S., Decker, L., ... Zhao, K. (2017, October). *Online resources for learners and teachers of English pronunciation.* Paper presented at the Intermountain TESOL Conference 2017, Provo, UT.
10. Henrichsen, L., **Peterson, J.**, Balci, L. F., Carreño, S., Carter, S., Decker, L., ... Zhao, K. (2017, September). *Online resources for learners and teachers of English pronunciation.* Poster presented at the 9th Annual Conference on Pronunciation in Second Language Learning and Teaching (PSLLT) 2017, Salt Lake City, UT.
11. **Peterson, J.** (2017, August). *Nihon-go no goi, bunpō, kanji, oyobi bunka ni kansuru chishiki no gūhatsu-teki gakushū: Kami-baitai kyōzai, onrain kyōzai, dejitaru gēmu no hikaku [Incidental learning of Japanese vocabulary, grammar, kanji, and culture through reading online, in print, and in digital games].* Paper presented at the 7th International Conference on Computer Assisted Systems for Teaching & Learning Japanese (CASTEL/J), Tokyo, Japan. Retrieved from <https://doi.org/10.13140/RG.2.2.23241.85605>

12. **Peterson, J., & Sano, R.** (2017, February). *Development of digital materials for teaching Japanese pitch accent*. Paper presented at the Utah Foreign Language Association's 102nd Annual Conference, Orem, UT. Retrieved from <https://doi.org/10.13140/RG.2.2.10134.65600>
13. **Peterson, J.** (2016, April). *Incidental learning of Japanese through reading online, in print, and in digital games*. Poster presented at the BYU Grad Expo, Provo, UT.
14. **Peterson, J.** (2015, October). *Incidental learning of Japanese through video games*. Paper presented at the Western Conference of the Association of Asian Studies, Salt Lake City, UT. Retrieved from <https://doi.org/10.13140/RG.2.2.16845.54247>

Significant Intellectual Property/Educational Materials

- Peterson, J.** (2018). Japanese Extensive Reading Resources Database (JERRD) (Version 70). Provo, UT.
- Peterson, J.** (2018). *Nakama II: Grammar explanation videos online (Chapters 6-10)* [Digital Video]. West Lafayette, IN.
- Peterson, J.** (Narrator/Contributing Staff). In Fujie, N. (2018). *Nakama I: Grammar explanation videos online (Chapters 1-6)* [Digital Video]. West Lafayette, IN.
- Peterson, J.** (Narrator/Contributing Staff). In Yamamoto, R. (2018). *Nakama I: Grammar explanation videos online (Chapters 7-12)* [Digital Video]. West Lafayette, IN.
- Peterson, J.** (Contributing Staff/Video Cast Member). In Fukada, A., Wei, M. M., & Cantrell, K. M. (2017). *Learning Japanese Online*. West Lafayette, IN: Purdue University.
- Peterson, J.** (Designer/Contributing Staff). In Hatasa, K. (2017). Japanese Pitch Accent Learning and Practice Program [Computer Application]. West Lafayette, IN.
- Peterson, J., & Peterson, R.** (2017). Reading Fluency Solutions (Version 1.0.0) [Web Application]. West Lafayette, IN. Available from <https://reading-fluency-solutions.firebaseio.com/>
- Peterson, J.** (2011) *Toward Better Japanese and Intermediate Reader-Japanese History and Culture: 5,318 Digital Flashcards*. Flashcards Deluxe.

Workshops/Training

Workshops at the 7th International CASTEL/J Conference (I-JAS Corpus, Computer-based Testing, & OJAD), August, 2017. An introduction to the International Corpus of Japanese as a Second Language, computer-based testing, and the Online Japanese Accent Dictionary.

The ACTFL Oral Proficiency Interview (OPI) Assessment Workshop (4 days), June, 2015. An intensive four-day introduction to the techniques of administering and rating the ACTFL Oral Proficiency Interview.

The German Linguistics Annual Conference Workshops (Statistics and Proficiency), May, 2015. An introduction to Mixed-effects Models and other statistical methods.

Teaching Experience

Adjunct Professor of Japanese, Department of Asian and Near Eastern Languages, Brigham Young University, January 2019-Present

Japanese Language and Linguistics Instructor, School of Languages and Cultures, Purdue University, August 2016-December 2019

Japanese Language Instructor, Department of Asian and Near Eastern Languages, Brigham Young University, August 2015-April 2016

Japanese Language Teaching Assistant, Department of Asian and Near Eastern Languages, Brigham Young University, January 2015-April 2016

Japanese Language Instructor, Utah Valley University Community Education, Fall 2014, 2015

English Language Instructor, Sarufutsu-mura Board of Education, Pre-, Elementary, and Middle Schools, Japan, July 29, 2012-July 29, 2014

English Language Instructor, Chinggis Khan University, Ulaanbaatar and Darkhan Schools, Mongolia, November 2008-May 2010

*Courses Taught***Purdue University**

<u>Course</u>	<u>Title</u>	<u>Sections</u>	<u>Textbook</u>
JPNS 101	Japanese Level I	1	Nakama 1
JPNS 101 (Online)	Japanese Level I	1	Nakama 1
JPNS 102	Japanese Level II	1	Nakama 1
JPNS 102 (Online)	Japanese Level II	2	Nakama 1
JPNS 201	Japanese Level III	1	Nakama 2
JPNS 201 (Online)	Japanese Level III	3	Nakama 2
JPNS 202 (Online)	Japanese Level IV	1	Nakama 2
JPNS 361	Elementary Survey Of Japanese Linguistics	1	Japanese Ling: An Intro (Yamaguchi)

Brigham Young University

<u>Course</u>	<u>Title</u>	<u>Sections</u>	<u>Textbook</u>
JAPAN 101	First-Year Japanese (1 st Semester)	3	JSL, JWL
JAPAN 102 (ACT)	First-Year Japanese (2 nd Semester)	1	JSL
JAPAN 301	Japanese Reading and Culture	5	TBJ (BYU)
JAPAN 302	Readings in History & Culture	5	Itm Rdr (BYU), Jpn: Hist/Cul (Morton)
JAPAN 302 (ACT)	Readings in History & Culture	1	Itm Rdr (BYU)

Utah Valley University

<u>Course</u>	<u>Title</u>	<u>Sections</u>	<u>Textbook</u>
Japanese	Beginning Japanese	2	Yookoso (2014) Genki (2015)

Scholarships, Grants, Awards, and HonorsResearch Funding Awarded

Teaching Assistantship, Purdue University, 2016-2019

ResearchGate Achievement: Most Read Contributions from Purdue University School of Languages and Cultures Department, ResearchGate, 2017-2019
(Seven-time recipient)

SLC Graduate Student Travel Grant, Purdue University, 2019..... \$ 553

ResearchGate Achievement: Most Read Research Item from Purdue University School of Languages and Cultures Department, ResearchGate, 2018-2019
(Three-time recipient)

College of Liberal Arts Scholarship, Purdue University, 2018-2019

PROMISE Research Grant (Tier 1), Purdue University, 2018-2019 \$ 750

Research Assistantship, Purdue University, 2018

SLC Graduate Student Travel Grant, Purdue University, 2018..... \$ 710

PROMISE Research Grant (Tier 1), Purdue University, 2017-2018 \$ 750

PROMISE Research Grant (Tier 2), Purdue University, 2016-2017 \$1,500

College of Liberal Arts Scholarship, Purdue University, 2016-2017

Phi Kappa Phi Honor Society Nominee, Brigham Young University, 2016

Second Language Teaching Scholarship, Brigham Young University, 2014-2016

JET Kizuna Ambassador, Internal Affairs and Communications of Japan, 2014

Brigham Young Grant, Brigham Young University, 2011-2012

New Century Scholarship, Full Tuition Scholarship, Utah System of Higher Education, 2010-2011

New Century Scholarship, Full Tuition Scholarship, Utah System of Higher Education, 2007-2008

Nominated to Order of the Arrow (Scouting's National Honor Society), Utah, 2007

Eagle Scout Award, Boy Scouts of America, 2007

Dean's List, Utah Valley University, Fall 2006

Dean's List, Utah Valley University, Fall 2005

Citizenship/Service

Japanese Tea Hour Organizer, Facilitator, and Presenter, Purdue University, November, 2017. Organized, developed materials for, and facilitated multiple Japanese conversation hour activities focused around conversing on topics related to what students were currently studying across three levels (novice, intermediate, and advanced).

Japanese Tea Hour Presenter, Purdue University, March, 2017. Introduced learners of Japanese to online reading resources such as Rikai-sama, websites containing lower level reading passages, and extensive reading resources available through Purdue University library.

Volunteer Interpreter, Utah Valley University, October, 2015. Interpreter for the university sponsored Scratch programming event as part of a collaboration with Saitama University.

Regional Japan Culture Bowl Organizer and Facilitator, Utah, December 2014-March 2015. Annual competition for learners of Japanese as a second language in Utah. Sponsored by the Japan-America Society.

Japan Club Vice-President, Brigham Young University, August 2014-August 2015.

Volunteer Translator and Interpreter, Oregon Wild Salmon Center, Japan, March 2013-May 2014. Translated and interpreted for the Center's Senior Biologist, Dr. Pete Rand.

Volunteer Translator and Interpreter, Sarufutsu Village Hall, Japan, July 2012-July 2014.

Africa Hygiene Aid Project Manager, Utah and Ethiopia, 2005-2007. Eagle Scout project providing 100 hygiene kits to children in Africa.

Professional Organization Membership

AAAL (American Association for Applied Linguistics)

AATJ (American Association of Teachers of Japanese)

ACTFL (American Council on the Teaching of Foreign Languages)

LSA (Linguistic Society of America)

UFLA (Utah Foreign Language Association)

OA (Order of the Arrow - Scouting's National Honor Society)

CASTEL/J (Computer Assisted Systems for Teaching & Learning Japanese Group - Participant)

ΦKΦ (The Honor Society of Phi Kappa Phi - Nominee)

Language and Computer Skills • Certificates

Japanese

Near-native

Superior, ACTFL Oral Proficiency Interview (OPI)

Level N1, Japanese-Language Proficiency Test (JLPT)

Level N2, JLPT

Level N3, JLPT

Level 3, Japan Kanji Aptitude Practice Test (Nihon kanji nōryoku kentei)

Level 5, Japan Kanji Aptitude Test

Advanced, Course Certification

(Council of Local Authorities for International Relations)

Language of Specialization, Purdue University Ph.D., BYU M.A.

B.S. Minor in Japanese, BYU

Mongolian

Intermediate (2-year sojourn in Mongolia)

Chinese

Novice (Reading knowledge, 2 years)

Spanish

Novice (2 years)

English

Native

Certified Teacher of Conversational English as a Foreign Language

(BYU Language Center)

Microsoft Office Suite of Programs

Microsoft Office Specialist, Certification through Microsoft

Web Development and Programming

Languages

CSS, HTML, PHP, Scratch

JavaScript (25 JavaScript badges earned through Codecademy)

Tools and Platforms

Visual Studio Code, Adobe Dreamweaver, GitHub, Firebase

Game and Interactive Story Development

Tools

ARIS, inklewriter, Scratch, Twine