



A Longitudinal Study of Japanese Learners who Continued Extensive Reading: Analysis of Records Throughout Elementary, Junior and Senior High Schools

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This paper reports a longitudinal study that observed Japanese learners in a long-term extensive reading program. The participants were nine students who continued reading throughout their elementary to senior high school years. Observation periods varied from learner to learner: they started reading between pre-school and 5th grade and ended between 11th and 12th grades. The analysis used their reading history corpus and reading and teaching records, which included the titles of books read, how they were read, notable events, learners' comments, interviews with six participants, and teacher's observations. The corpus analysis revealed a common and rapid growth in reading for most participants between the 7th and 9th grades. Analyzing the transition process of book selection, which was divided into three major categories with 8 subcategories, some transitions varied from participant to participant, reflecting their readiness to extensive reading, motivation to EFL learning and reading, self-confidence, and reading preferences. Six participants' comments extracted from classroom communication and interviews revealed that their motivations for EFL learning focusing on extensive reading were diverse and dynamic, which was reflected in their reading amount and book selections.

Keywords: longitudinal study, extensive reading, corpus, reading history

The diversity of university entrance examination methods has resulted in a variety of students enrolling in universities at different proficiency levels. General education classes, which are mainly offered in the first and second years of university, address the gap in students' basic academic skills. In particular, English proficiency of the students varied considerably during at least 6 years of learning English before entering university. Many studies support the idea that an extensive reading approach provides enjoyment and motivation to read English for such a diverse group of learners (e.g., Robb & Susser, 1989; Cho & Krashen, 1994; Mason & Krashen, 1997; Takase, 2003; Nishino, 2007) and that it can address differences in English level and is effective in improving English language proficiency.

On the other hand, if extensive reading had been introduced to students before they entered university, they would have been able to develop their English proficiency at their own pace. Therefore, the purpose of this study was to observe how Japanese learners change with long-term extensive reading experiences.

Literature Review

Nation and Waring (2020) define extensive reading as "independently and silently reading lots of books which are at the right level for them" (p. 5). Day and Bamford (1998) describe the characteristics found in successful extensive reading programs, including "read as much as possible," "select what they want to read", reading for

“pleasure, information, and general understanding”, “reading materials are well within the linguistic competence”, “individual and silent” reading (pp. 7-8).

Many studies on both L1 reading (e.g., Nagy and Herman, 1987; Chall, 1987) and L2 reading (e.g., Krashen, 1985; Grabe, 1988, 2009; Laufer, 1992; Day & Bamford, 1998; Hu & Nation, 2000; Nation, 2001; McQuillan, 2016; Nation & Waring, 2020) have agreed that vocabulary knowledge is essential for text comprehension for successful extensive reading. Grabe (1988) states that “fluent readers need a massive receptive vocabulary that is rapidly, accurately, and automatically accessed” (p. 63). The importance of selecting books at the appropriate level for each learner’s level has been agreed upon in many studies, although the ‘appropriate level’ is represented slightly differently. For example, ‘i minus 1’ represents that the level of the book is within the learner’s ‘comfort zone’ (Day & Bamford, 1998), and “i + 1” represents that the level of the books with comprehensible input slightly beyond the learner’s linguistic level is optimal for language learning (Krashen, 1985). McQuillan (2016) states that a gradual increase in book difficulty, with each level of text slightly higher than the lower levels, is the optimal path for extensive reading. Hu and Nation (2000) and Nation and Waring (2020) concluded that 98% of the running words in a fictional text should be covered by known words for adequate comprehension, reading motivation, and vocabulary learning.

Nagy and Herman (1987) discuss in their L1 research that “incidental learning of words during reading may be the easiest and single most powerful means of promoting large-scale vocabulary growth” (p. 27). Although Nagy (1997) even argues against direct vocabulary teaching for native speaking learners, direct vocabulary teaching for L1 learners would focus on

low-frequency vocabulary that they have limited chances to encounter while reading, according to Chall (1987), who estimates that L1 children beginning school already know 5,000 to almost 8,000 word families. EFL learners beginning to study have a vocabulary of approximately zero. Nation (2001) points out that vocabulary learning from extensive reading is very fragile and that it is critically important for learners to have the opportunity to keep meeting the same words by doing large amounts of extensive reading at suitable vocabulary levels and by complementing the extensive reading with the direct study of vocabulary focusing on the high-frequency words which “can add to incidental learning of the same words and can raise learners’ awareness of particular words so that they notice them when they meet them while reading” (p. 157). As Palmer (1921/2009) viewed extensive reading and intensive reading under “the principle of multiple line of approach” (p. 90) as approaches to language that can be adopted concurrently but not in one and the same operation, the present study sees incidental learning using extensive reading as one of the essential methods that can be incorporated.

In addition to vocabulary, previous studies have discussed other factors that affect extensive reading, including phonological awareness and alphabetic comprehension (Carnine et al., 2004), the ability to use context (Patberg, Dewitz, & Samuels, 1981; Schwantes, 1982.), and prior knowledge of information relevant to the text (Anderson & Pearson, 1984; Bransford, Stein, & Shelton, 1984).

Fluent reading is ‘the product of long-term effect and gradual improvement’ (Grabe, 1991). Despite the potential long-term benefits of extensive reading, only a few longitudinal studies have been conducted (Nishino, 2007; Nishizawa, Yoshioka, & Fukada, 2010; Kanda, 2011;

Nishizawa, Yoshioka, & Ichikawa, 2017). Kanda (2011) reported a two-year monitoring and assessment of three university students' extensive reading with different levels of motivation. Nishino (2007) reported a 2.5-year case study on 2 Japanese middle school students who were beginning to read extensively. Nishizawa, Yoshioka, and Fukada (2010) and Nishizawa, Yoshioka, & Ichikawa (2017) reported 5-year extensive reading programs for engineering students. However, opportunities for continuous observation of the same learners across schools (elementary, junior high, and senior high school) are very rare. Therefore, this study aims to present the findings of a long-term observation of learners who continued EFL learning focused on extensive reading from preschool and elementary school through their high school years.

To observe long-term learners, it is necessary to observe not only their learning processes and outcomes but also their affective changes. Motivation has been studied from several different theoretical perspectives: self-efficacy theory, which views high self-efficacy as related to high-level motivation and successful achievement (Bandura, 1977); self-determination theory, which views motivation as a continuum of stages depending on the degrees of self-determination and autonomy (Ryan & Deci, 2000); and the L2 motivational self system, which explains motivation in terms of three perspectives: ideal L2 self, ought-to L2 self, and L2 learning experience. (Dörnyei and Ushioda, 2009).

Context of this study

This case study was conducted as a part of a free weekend English program for local children. Two mixed-grade classes, both reading-focused, were offered depending on the stages of learning English related to

reading: 1) a learn-to-read class (2004-) and 2) an extensive reading class (2009-).

The learn-to-read class was designed for young learners from English beginners to supported readers, typically up to the sixth grade. 1.5–2 hours of in-class activities included: explicit learning for vocabulary, phonics, orthography, basic grammar, reading books to learners, reading along, and content-based learning for basic cultural, social, and scientific understanding.

For out-of-class reading, participants chose books from the series and levels recommended by the teacher, and read the books aloud at home with the help of CDs and family members. Because it was found that some family members wanted to support the participants' reading, the books were explained in advance only to those who needed introductions. The number of books to read was up to the participants, but they were recommended to read mainly 2 series of books: Reading AtoZ and Oxford Reading Tree. They read the books aloud in the classroom the following week, as listened to by the teacher. They also copied the book titles in the reading log.

As they gradually became used to reading aloud with audio support and were observed to have developed an awareness of word boundaries, they started to add comments of 3-5 words on the books (e.g., *It was fun.* / *It was a good story.* / *It was difficult.* / *I like ...* / *I don't like ...*, etc.).

When they were found to be able to read aloud mostly without audio support, which indicates that their sight vocabulary and/or phonemic awareness developed, they started to summarize books. They started with "pick-up reading", in which they picked up sentences that were more important to understand the outline of a story, instead of reading aloud the whole

book, initially with instructor's assistance. They shared the pick-up reading with peers and gradually started to use grammatical knowledge to make the sequence of each sentence flow better, by replacing repeated proper nouns with pronouns, omitting some words, and so on. They also wrote a pick-up summary report. They were sometimes asked to summarize a book in Japanese to ensure that they understood the stories. Finally, they summarized a book in English.

When they were found to be able to read books silently and independently with good comprehension, they moved to the extensive reading class. Most participants moved to the extensive reading class in the seventh grade year, although there were some individual differences.

The extensive reading class was designed for learners who were ready to read extensively. In-class activities included conversations on daily life topics, book talk and written book reports based on out-of-class reading, and listening activities using movies and news programs. They sometimes used CDs with recorded texts, which were not for reading aids but for listening practice.

Research Questions

This paper attempts to establish hypotheses for the following research questions through long-term observation of some participants:

RQ1. How does the amount of reading and incidental lexical input change through long-term extensive reading?

RQ2. How do the types and levels of books read by learners change and vary?

RQ3. What factors would affect long-term extensive reading in the Japanese cultural context?

Participants

The inclusion criteria for participants in the study were as follows: 1) Japanese students who joined the learn-to-read program during or before the elementary school period (1st-6th grade) and continued reading until the senior high school period (10th-12th grade), 2) students who have no family members who use English as L1, 3) students who have not stayed in an English-speaking environment for more than 3 consecutive months. Nine program participants who met these criteria between 2004 and 2023 and their parent(s) agreed to participate in this study. Since the program itself was not part of the school curriculum and the participants came from different schools, the attendance of each participant could not be controlled; for example, they were absent during school exam periods, before entrance exams, school and family events, and so on.

The participants joined this program in different years. The school year in which each participant first joined the program and the length of observation are shown as follows:

Table 1

Participants in the Program

Participant	Gender	length of participation	(school grades)
A	Female	9 years 6 months	(3rd – 12th)
B	Female	14 years 6 months	(pre 1 -12th)
C	Female	12 years 6 months	(pre 3 – 12th)
D	Female	9 years	(2nd – 11th)
E	Female	12 years 6 months	(pre 3 – 12th)
F	Female	7 years 6 months	(5th–12th)
G	Male	7 years 7 months	(4th – 11th) *
H	Male	7 years 7 months	(4th – 11th) *
I	Female	13 years	(pre 2 – 11th)

Notes: *Participants G and H, who are in the 7th month of the 11th grade, are still participating in the program.

"Pre" refers to preschool grades.

Data Collection and Analysis Method

The titles of the books that each participant read each year were collected from their reading logs and used for the analysis. The regular reading-focused classes were interrupted for 3 months each year, except in 2020 and 2022, to enable students to engage in creative and cooperative group projects. The participants were reading texts during this period, but the texts used for the special projects were excluded from this study because the texts written for the projects included intentional vocabulary and grammar learning.

To answer RQ1, all the texts read were scanned and converted to text files, and a reading history corpus was built for each participant. As a measure of reading growth, the total number of tokens (running words) read in each year was counted. As a measure of vocabulary input, the number of word types (word forms) encountered was

counted. Word types were counted instead of lemmas and word families because the participants lacked morphological knowledge for at least the first several years.

To answer RQ2, the series and levels of books read by each participant each year were categorized to extract common and individual characteristics regarding the transition of book selection.

For RQ3, statements that expressed each participant's feelings and attitudes toward learning were recorded in the teaching record to identify emotional factors that might influence their long-term EFL learning, especially extensive reading. Interviews were also conducted with six participants (A, B, C, D, E, and I) to reflect on their learning during the 10th grade (E), 9th grade (A, D, I), and 8th grade (B). The statements extracted were examined to hypothesize potential predictors of

long-term learning outcomes from extensive reading.

Results

Reading Amount and Distinct Forms Read by Each Participant

Figures 1–4 show the number of tokens annually read by participants divided according to the grades in which they joined the program.

Figure 1. Changes in Reading Amount: Participants B, C, and E (Pre 1/ 3-)

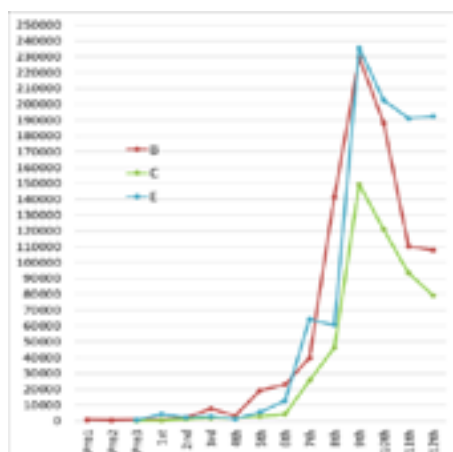


Figure 2. Changes in Reading Amount: Participants A and D (Grade 2/3-)

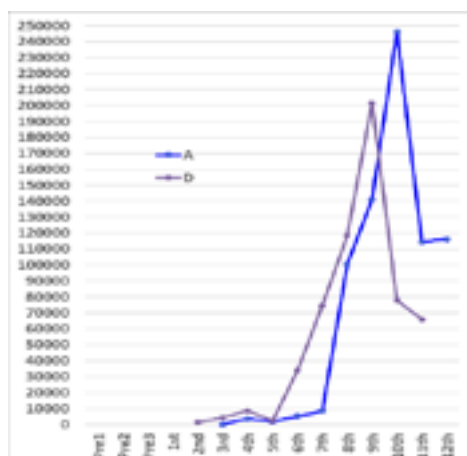


Figure 3. Changes in Reading Amount: Participants G and H (Grade 4-)

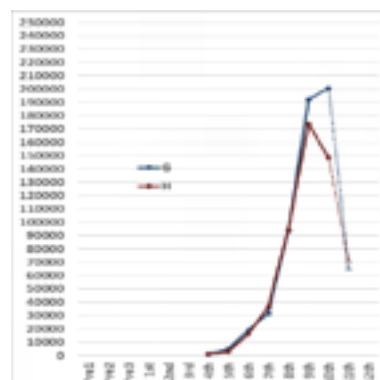


Figure 4. Changes in Reading Amount: Participant F (Grade 5-)



Figure 5. Changes in reading Amount: Participant I (Pre 3-) with Special Support Needs



Although they started the reading program in different grade years, the number of tokens read commonly increased rapidly from the 7th to 9th grade years and dropped

after that, except for Participant I. In the 12th grade, they left the program halfway to prepare for the entrance exam for the university. Participant D left the program to study abroad. Participants G and H have not finished their 11th grade year yet.

How early the participants started learning had some influence on when their reading amount began to rapidly increase although some individual differences were observed. However, it was also found that the earlier they started learning did not necessarily mean that their reading amount would rapidly increase earlier, but rather that they stayed in the slow-pace period longer. The three participants who started reading earliest during preschool years (B, C, E) kept a slow pace throughout elementary school years. Comparing participants who started between preschool and third grade (B, C, E, D, A), how early they started the program did not affect their final annual reading growth. Participant A started the program in her 3rd grade year, and her reading amount started to show rapid increase later than Participants B, C, E, and D, who started learning earlier, but she finally showed the highest peak annual reading amount in the 10th grade year. Participant F, who started the program in the fifth grade, later than the other participants, showed a similar rapid growth beginning in the seventh grade, but the growth during the junior high school period (7th-9th grades) was less than that of most of the others who started earlier (A, B, C, D, E, G and H). The reading amount of Participant F showed an unstable curve that differed from that of the other participants: after a rapid increase, the annual reading amount dropped followed by an increase again.

As an exceptional case, Figure 5 shows an example of a participant with special support needs. Participant I was born

extremely prematurely and apparently showed reading problems that were attributed to her developmental delays and challenges. She joined the program during the preschool year, but she did not show a rapid increase as did other participants. She showed difficulties grasping the storyline, although she had no problem reading aloud or translating each sentence. Since she had almost no experience of L1 reading either, she was encouraged to try some exercises in reading and summarizing L1 books in the 8th grade, which she also showed difficulty with. Her reading amount in English started to gradually increase later, but whether this change was due to developmental timing or to learning remains unclear in this study.

Figures 6-10 show how the number of word types read each year and the accumulated word types grow.

Figure 6. Annual/Accumulated Word Types: Participants B, C, and E (Pre 1/3-)

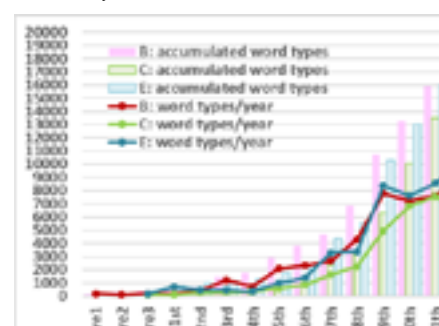


Figure 7. Annual/Accumulated Word Types: Participants A and D (Grade 2/3-)

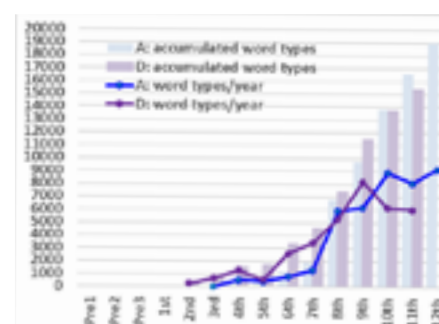


Figure 8. Annual/Accumulated Word Types: Participants G and H (Grade 4-)

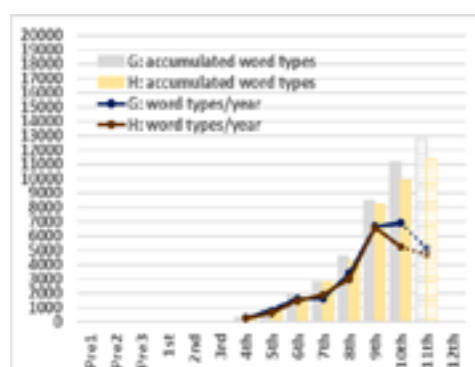
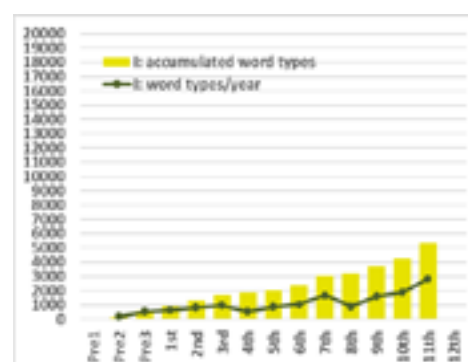


Figure 9. Annual/Accumulated Word Types: Participant F (Grade 5-)



Figure 10. Annual/Accumulated Word Types: Participant I (Preschool-)



While the number of tokens increased rapidly from the 7th to 9th grades, the number of annual word types did not increase as rapidly, indicating that the participants encountered the same word more frequently. Table 2 shows the change in type/token ratio, which is the percentage of different forms to running words in the text.

Table 2.

Type/Token Ratios of Books Annually Read by Each Participant

	A	B	C	D	E	F	G	H	I
Pre1		24.66							
Pre2		24.63							35
Pre3		21.45			25.92				18.11
1st		29.53	25.99	25.99	16.33				18.11
2nd		17.94	20.99	20.99	20.89				17.1
3rd	35.85	15.96	23.1	23.1	17.13				19.92
4th	14.61	22.29	23.8	23.8	27.46		23.4	28.16	22.84
5th	22.94	10.82	20.34	20.34	18.24	24.3	17.3	20.93	18.04
6th	15.17	10.14	19.33	19.33	10.74	13.68	8.54	9.18	14.64
7th	15.44	6.71	6.4	6.4	5.13	9.04	5.3	5.18	13.26
8th	5.9	3.05	4.88	4.88	5.6	3.01	3.63	3.18	19.12
9th	4.41	3.39	3.31	3.31	3.56	3.25	3.47	3.79	8.87
10th	3.62	3.84	5.69	5.69	3.78	4.97	3.45	3.54	9.15
11th	7.08	6.92	8.11	8.11	4.49	5.7	18.85	8.62	3.66
12th	7.89	8.34	8.1	8.1	5.31	6.76			

Table 2 shows that the type/token ratio dropped considerably during the period when the reading amount rapidly increased. The type/token ratio was over 20% during the learn-to-read period, when they were reading at a slow pace, whereas the ratio dropped to around 3% during the period when rapid reading growth was observed. A lower type/token ratio indicates that the same word form appears repetitively, thus reducing the amount of vocabulary knowledge required for a text of the same length and thus lightening the learner's load in reading. Besides the fact that the participants gradually became accustomed to reading and increased their vocabulary knowledge during the learn-to-read period, it is also considered that an increase in text coverage of repeatedly used words was another factor leading to the rapid increase in reading amount.

Following the drop in the type/token ratio, it increased slightly again. This slight increase implies that the books read by the participants changed. Although participants A, B, C, D, and E dropped their reading amount during their senior high school years (10th-12th grades), their accumulated word types continued to grow, which also implies that they started to read books that included different word forms from those they had previously read.

Transition in Book Selection

To examine how the books read changed over time and how each participant's book selection varied, the books read by participants were first categorized by book type and level. As a result, their reading histories were roughly classified into three main categories with eight lower phases as follows:

Category 1: Learn-to-read books for young beginners

e.g., Reading AtoZ (AtoZ), Oxford Reading Tree (ORT), and other series

Category 2: Graded readers for adult learners

2-A: Graded readers for adults, Starter level

Foundation Reading Library (FRL) level 1-7, Oxford Bookworms (OBW) Starter, MacMillan Reading (MMR) 1, Penguin Readers (PGR) Easystart, Cambridge English Readers (CER) S, Page Turners (PT) level 1-2

2-B: Graded readers for adults, Elementary level (headword level -1000)

PT level 3-6, OBW level 1-2, MMR level 2, PGR level 2, CER level 1-2

2-C: Graded readers for adults, Intermediate level (headword level 1,000-2,000)

PT level 7-10, OBW level 3-4, MMR level 3-5, PGR level 3-4, CER level 3-4

2-D: Graded readers for adults, Advanced level (headword level 2,000-3,000)

PT: level 11-, OBW level 5-6, PGR level 5-6, CER level 5-6

Category 3: Non-graded books for L1 readers

3-A: Non-graded shorter books for L1 younger children

3-B: Non-graded longer books for L1 older children

3-C: Non-graded books for L1 teenagers/adults

All the participants started with Category 1 books. In this study, the participants mainly

used two series of books: AtoZ (American English version) and ORT, written in British English. Most participants reached ORT level 6 before moving on to graded readers for adult beginners. The timing of moving from Category 1 books to Category 2 books varied slightly from participant to participant (see Table 3). The length of an ORT level 6 book is about the same as that of FRL level 1, the easiest series for adult beginners. Participants who read ORT level 6 said during elementary school years that they commonly found the ORT level 6 more difficult in terms of vocabulary, but found some of the FRL books more difficult to comprehend. Perhaps because the FRL books feature high school students as the main characters and include scenes of part-time jobs, computers, dating, etc., it was difficult for young learners to understand the background of the stories.

Individual differences were found to be more pronounced after 7th grade. Table 3 summarizes the categories of books participants read at each grade level. For Categories 1 and 2, the series and levels read by the participants are given, and for Category 3, the name of the series and book title are given. For the series that the participant particularly liked and read most often, the number of books read is shown after the series name.

Early starters naturally spent more time reading many levels of Category 1 books during slow-pace period. Participant B spent 9 years reading 7 levels of ORT, and 11 levels of AtoZ books. F, who started in the 5th grade, read 4 levels of AtoZ and 4 levels of ORT within 2 years.

Most female participants did not read many or any Category 2-D books, advanced level graded readers, and shifted to Category 3 books written for L1 children. The

participants who started reading L1 children's books during junior high school were all participants who started learning to read earlier, between preschool and the third grade. Participant C and Participant F did not read Category 3 books during junior high school years, but they shifted to Category 3 books instead of reading Category 2-D books in grades 11 and 12, as did other female participants.

The two male participants chose books differently from the female participants. Participant G chose mysteries and crime stories more often than the female participants. Participant H often looked for books on science fiction, history, and baseball. They followed the order of the levels of graded readers in their reading history. They read Category 3 books only when the teacher suggested that they might want to try reading something different once in a while. The *'Who was...?'* series was the only Category 3 series in which they both read 4-5 books. Three of five books the participant H read from this series were about baseball.

Some participants found favorite books or series, which prompted them to increase their reading. Those who found their favorite books and series and boosted their reading were all those who started learning to read earlier, between preschool years and the third grade: for example, *Magic Tree House* series (Participant A), *Magic Key* series (ORT), *A to Z mysteries* series, and *Magic Tree House* series (Participant B), and *My Weird School* series (Participant D), *Rainbow Magic* series, *Who Was ...?* series, and Roald Dahl's books (Participant E).

During senior high school years (10th-12th grades), the participants tended to choose considerably more challenging books than those they had previously read.

Table 3.

Participants' Book Selections

	A (G3 – G12 (6 months))	B (Pre1 – G12 (6 months))	C (Pre3 – G12 (6 months))
- G6	1 (ORT 1-4, AtoZ: aa-F)	1 (ORT 1-7, AtoZ: aa-J) 2-A (PGR: ES)	1 (ORT:1-4, AtoZ: aa-E) 2-A (FRL:1)
G7	1 (AtoZ: F, ORT: 4-5) 2-A (PGR: ES, CER: S)	1 (AtoZ: J, K, ORT: 8-9) 2-A (FRL:2,3,7, PT:1, PGR:1, CER: S)	1 (AtoZ:G H I, ORT:4) 2-A (FRL:1-5, OBW:S) 2-B (OBW:1, CER:1)
G8	2-B (OBW: 1-2, CER: 1, MMR: 3) 3-A (<i>Magic Tree House</i> series (5), <i>The Adventure of Captain Underpants</i>) 3-B (<i>The Magic Finger</i>)	1 (AtoZ: K, L) 2-A (FRL: 7, PT: 1, PGR1) 2-B (PT: 4–5, OBW: 1–2, MMR:3)	1 (AtoZ: I) 2-A (FRL:5, PT:2, PGR:1, MMR:S) 2-B (OBW: 1-2, CER: 1)
G9	2-B (OBW:2, PGR:2, MMR:2) 2-C (OBW: 3-4, CER: 3-4, MMR:3) 2-D (OBW: 5, CER: 5) 3-A (<i>A to Z Mysteries</i> , <i>Cupid Doesn't Flip Hamburgers</i>) 3-B (<i>Who was...? series</i> , <i>The Goose's Gold</i>)	2-B (PGR: 2, CER: 1-2) 2-C (OBW: 3-4, CER: 3) 2-D (OBW: 5, CER: 5) 3-A (<i>Magic Tree House</i> series (6), <i>A to Z Mysteries</i> (8), <i>Freckle Juice</i>)	2-B (PT: 6, OBW: 1–2, PGR: 2, CER:2) 2-C (PT: 7, PGR: 3) 3-A (<i>Yokai Watch</i>)
G10	2-B (PT:6, OBW: 2, PGR:2) 2-C (OBW: 4, PGR: 3-4) 2-D (OBW: 6) 3-A (<i>Magic Rainbow</i> series, <i>Funny Frank</i>)	2-C (PT:9-10, OBW:4, PGR:3) 2-D (PT: 11-12, CER: 5) 3-A (<i>A to Z Mysteries</i> (2)) 3-B (<i>Shoebag</i>) 3-C (<i>Two Old Women</i>)	2-B (PGR: 2) 2-C (PGR: 3-4) 2-D (MMR: 5) 3-C (<i>Secret Diary Adrian Mole</i>)
G11	3-B (<i>Mary Poppins</i> , <i>Phantom Tollbooth</i> , <i>How to Eat Fried Worms</i>) 3-C (<i>A Wrinkle in Time</i>)	3-A (<i>Library Lion</i>) 3-B (<i>Boy, Wonder</i>)	3-B (<i>Because of Winn-Dixie</i> , <i>Boy</i>) 3-C (<i>Tuesdays with Morrie</i>)
G12	3-C (<i>The Fault in Our Stars</i>)	3-C (<i>The Kite Runner</i>)	3-B (<i>Three Cups of Tea</i>) 3-C (<i>The Giver</i>)

	D (G2 – G11 (4 months))	E (Pre3 – G12 (6 months))	F (G5 – G12 (6 months))
- G6	1 (ORT 1-7, AtoZ: A-I)	1 (ORT 1-5, AtoZ: aa-F, I) 2-A (OBW:S, PGR:ES, MMR:1)	1 (ORT:1-4, AtoZ:A-C)
G7	2-A (OBW:S, PGR:ES, MMR:1) 2-B (OBW:1, PGR:2, CER:1) 2-C (MMR:3) 3-A (<i>Rainbow Magic</i> series)	1 (AtoZ: J) 2-B (OBW: 1,2) 3-A (<i>Rainbow Magic</i> series (7))	1 (ORT: 4-5, AtoZ: E) 2-A (FRL: 1-2)
G8	2-B (OBW: 2, PGR: 2) 2-C (OBW: 3, PGR: 3) 3-A (<i>Magic Finger, The Littles</i>) 3-B (<i>Tangled</i>)	1 (AtoZ: J-M) 2-B (OBW: 2) 2-C (OBW: 3) 2-D (PGR: 5) 3-A (<i>Rainbow Magic</i> series(2))	2-A (FRL: 4, PT: 1-2) 2-B (PT: 3-4, OBW: 1)
G9	2-C (OBW: 4, PGR: 3) 3-A (<i>My Weird School</i> series (13), <i>The Tale of Greyfriars Bobby, The Adventure of Captain Underpants, Rainbow Magic</i> series) 3-B (<i>Full House Sisters, Who was...? series</i>)	1 (AtoZ: M) 2-B (PGR: 2) 2-C (OBW:3, PGR:3, MMR:3) 3-A (<i>Rainbow Magic</i> series (3), <i>Twits, The Littles, A Mouse Called Wolf, Franny K. Stein</i>)	2-B (PT:5-6, OBW:2, PGR:2) 2-C (OBW:3, MMR:3, SCR:3)
G10	3-A (<i>Happy Mouseday, My Weird School</i> series (4)) 3-C (<i>Anne of Green Gables</i>) *quit halfway	2-C (OBW: 3, PGR: 3, MMR:3-4) 3-A (<i>Magic Tree House</i> series (2)) 3-B (<i>Winnie the Pooh</i>)	2-B (PGR: 2) 2-C (PGR: 3-4) 2-D (MMR: 5) 3-A (<i>Magic Tree House</i> series (4))
G11	3-A (<i>Charlie & the Chocolate Factory</i>) 3-C (<i>Tuesdays with Morrie</i>)	2-A (PT: 2) 2-C (OBW:4, PGR:4, MMR:4) 2-D (MMR: 5) 3-A (<i>Clementine</i>) 3-B (<i>Who Was...? series</i> (6), <i>Comet in Moominland</i>)	3-B (<i>Because of Winn-Dixie, Holes, The Find-Outer's</i>) 3-C (<i>One of Us Is Lying</i>)
G12		2-B (PGR:2) 3-B (Roald Dahl's books (6), <i>Boy, Mr. Popper's Penguins</i>) 3-C (<i>A Wrinkle in Time</i>) *only the first chapter	3-B (<i>Wonder</i>)

	G (G4 – G11 (7 months))	H (G4– G11(7 months))	I (Pre3 – G11)
- G6	1 (ORT 1-6, AtoZ: A-F) 2-A (FRL: 1)	1 (ORT 1-6, AtoZ: A-F) 2-A (PGR: ES)	1 (ORT 1-5, AtoZ: aa-H)
G7	1 (other) 2-A (FRL: 1-7, PT: 1, OBW: S, PGR: ES, MMR: 1) 2-B (CER: 1)	1 (ORT: 6) 2-A (FRL:1-7, PT:2, MMR:1, CER:S) 2-B (CER:1)	1 (ORT: 5-6, AtoZ: H, I)
G8	2-B (PT: 5, OBW: 1-2, PGR: 2, CER: 1-2, SCR: 1) 2-C (OBW: 3)	2-B (OBW:1-2, PGR:2, CER:1) 2-C (OBW: 3, PGR: 3)	1 (ORT: 6, AtoZ: H, I) 2-A (FRL: 2)
G9	2-C (OBW: 3-4, PGR: 3-4, CER: 3, MMR: 4) 3-B (<i>Who was...? series</i> (4))	2-B (SCR:1) 2-C (OBW:3-4, PGR:3, CER:3, MMR:4, SCR:4) 3-B (<i>Who was...? series</i> (5))	1 (ORT: 7, AtoZ: J) 2-A (FRL: 3, 4, 5, 7)
G10	2-C (PT: 8, OBW: 3, PGR: 3-4, CER: 3) 2-D (PGR: 5, MMR: 5) 3-B (<i>Shoebag</i>)	2-C (PT:8, OBW:3, PGR:3, CER:3-4) 2-D (MMR: 5)	1 (AtoZ: I, J) 2-A (FRL:1, 2, 5, PCR:ES, MMR:1)
G11	2-D (OBW:6, CER: 6) 3-B (<i>Boy</i>) *quit halfway	2-C (MMR:4) 2-D (OBW:5, MMR:5, CER:6) 3-B (<i>Number the Stars</i>)	2-A (PT:1, CER:S, MMR:1) 2-B (PT: 3–4, OBW: 1–2)

Emotional Factors in Long-Term Extensive Reading

To examine the emotional factors that might affect long-term L2 learning focused on extensive reading, statements that expressed the participants' feelings and attitudes were extracted from teaching records and interviews with Participants A, B, C, D, E, and I.

A

'I was watching Harry Potter and others since I was little, and felt English was cool,

so I was interested in learning English.' (G3)

'I enjoy learning English when books are interesting, but I can't enjoy learning when books I choose are not interesting or they are difficult.' (G7)

'Once I start learning something, I continue it for a long time. Otherwise, I would feel sorry for teachers.' (G9)

'My friend is still further ahead in English, so I want to catch up with her.' (G9)

'I need to improve my English because I want to go to University X. I think it will help me get my dream job.' (G12)

B

'I don't remember when I joined the program. Mother just brought me here.' (Pre1)

'I enjoyed reading the Magic Key series.' (G5-7)

'When I passed the Eiken test, I felt I was better than others and proud of me.' (G7)

'When someone who started English later improved their English, I felt I had to work harder.' (G7-G8)

'It would be cool if I could speak English.' (G8)

'English would be useful in many ways.' (G8)

'I keep reading books to improve my vocabulary.' (G8)

'As long as I keep reading books here, I don't have to study English much for school.' (G8)

'I want to stop reading books and study to improve exam scores more efficiently.' (G11)

C

'Mother brought me here. I didn't think why. I didn't mind learning English, but I was nervous about being with people I didn't know.' (Pre3)

'I found my English was better than my mother's and started to read books independently and really like reading English books.' (G3)

'I started to see the difference between myself and others, and lost confidence.' (G5-6)

'I gained confidence feeling English was coming into my mind easily.' (G6-)

'I feel only English is something important related to my future.' (G8-)

'I feel confident at school: for example, when I passed the Eiken test.' (G8)

'I wrote journals in English, because my classroom teacher doesn't understand English.' (G8)

'I used to hate to let my mother listen to my English, but now I ask her to listen.' (G8)

D

'My mother brought me here. I was not interested in English. I didn't even know English. I had been enjoying piano and ballet lessons, so I thought English would be one more fun thing.' (G1)

'I started to enjoy English when I learned how sentences were made up of phonemes and words. Mother only helped me at the beginning. I was reading books with CDs myself.' (G2)

'I experienced excitement and pleasure of communicating in English during my family trip.' (G4)

'I enjoy learning English. I would quit it if it was not fun.' (G9)

'I can talk with ALTs [Assistant Language Teachers] and listen to my favorite foreign artists on YouTube. If I don't speak English, I can't enjoy my life.' (G9)

'The purpose of learning English is to use English, not for exams.' (G9)

E

'I don't remember when I joined the program. I just followed my mother.' (Pre3)

'I don't know why M-chan wondered what we need to learn English for. Without English, we will be in trouble.' (Pre3)

'I remember I cried when I started reading AtoZ, because I couldn't read the word 'cub', but I felt excited when I found the level A books were easy the following year.' (Pre3)

'It's easy, easy!' (when she read books that she couldn't read in the year before.) (G1)

'I don't think whether the book was interesting or not during elementary school years. I just thought, "I have to read it," "I'm supposed to read it."' (beginning-G6)

'I felt I needed to 'study' English for the first time after I entered senior high school.' (G10)

Most of the participants' motivations were initially external, except Participant A, and the participants who started before school age did not even remember when or how they started the program.

Most of their motivations were dynamic, and their changes varied. Participant A continued her learning motivated by comparisons between herself and her friends and by feelings of guilt toward her teachers. During senior high school, she continued reading with more autonomous motivations, linking learning English to her ideal future. In the 11th grade, she read the most among all the participants (see Figure 1).

Participant B enjoyed reading her favorite book series from the fifth to seventh grades. During her junior high school years, she preferred reading books to schoolwork, probably because she believed that extensive reading would help her improve her vocabulary and get closer to her ideal L2 self-image. Success in exams and competitions and comparisons with her peers boosted her confidence and motivation. After she questioned the effectiveness of extensive reading and became reluctant to read books for a while in the 11th grade, she decided to read 'more challenging books that would increase vocabulary' and read a book for L1 adults, which she rated as very difficult but very interesting (see Table 3).

Participant C had low self-confidence until her junior high school years, and her motivation was mainly influenced by comparing herself with other participants in the program, friends at school, her mother, and her school teacher, which tended to hinder her learning. After her self-confidence improved through successful experiences in exams and speech contests, her choice of books also changed (see Table 3).

Participant D's statements can be mostly classified as intrinsically motivated. During her elementary school years, she appeared to be an ideal learner, with a positive attitude, high self-confidence, and early signs of growth in reading. After the 7th grade, however, she chose only books that interested her without considering her level (see Table 3). She developed a strong interest in the U.S. and studied abroad in the 11th grade.

Participant E had a few experiences of short stays abroad during her childhood and was aware that she would be "in trouble" if she did not understand English. During junior and senior high school years, she said that she would enjoy the books she liked and

continued to read books in her preferred series for L1 children. She also stated that she had never thought that she “studied” English until she entered senior high school.

The interview with Participant I revealed that she had little recollection of what books she had read or what activities she had performed in the classroom until the 8th grade. She recalled some books she read and activities she attended in the 9th grade and said she enjoyed learning English from then on.

All the participants passed the English Proficiency Test (*Eiken*) Level 2 (D passed in the 8th grade; A, B, and G in the 9th grade; C, F, and H in the 10th grade; E in the 11th grade; and I in the 12th grade). Participants A, B, and C passed Level Pre-1 in the 12th grade, and participant D also passed Level Pre-1 after studying abroad.

Eiken tests are popular tests administered by the Society for Testing English Proficiency (STEP) since 1963. Eiken Level 3 equivalent to CEFR A1, Level Pre-2 to CEFR A2, Level 2 to B1, Level Pre-1 to B2, Level 1 to C1. (https://www.mext.go.jp/b_menu/shingi/chousa/shotou/117/shiryo/icsFiles/afieldfile/2016/05/24/1368985_15_1.pdf)

Analysis

The previous section showed that even though some participants began learning to read as early as preschool years, their reading amount did not increase rapidly until the 7th grade (see Figures 1-4). This rapid increase in participants’ reading coincided with the start of “independent” and “silent reading,” as Nation and Waring (2020) defined extensive reading.

As discussed in the previous studies reviewed in the introductory section, vocabulary knowledge, alphabet recognition,

and phonemic awareness are essential for text comprehension for extensive reading. Before the rapid increase in reading, the participants went through a period of preparation for extensive reading through reading short books aloud and explicit learning. Participants who began earlier spent more time in this preparatory period, while Participant F, who began in the fifth grade and spent only two years before extensive reading, reflected on her learning, ‘Especially in the sixth grade, I had to work hard to catch up with everyone else.’ The sense of burden she mentioned was found to refer to the special project they worked on once a year, but ‘working hard to catch up’ was apparently reflected in the amount of her reading.

Participants dropped the amount of reading after the 10th grade. In the Japanese cultural context, senior high school students typically become busy with homework, exams, club activities, and so on, which clearly caused this drop (RQ1). However, their accumulated word types read (the total number of new forms input) continued to grow, which indicates that they continued to encounter new lexical items even through the reduced time for extensive reading (Figures 6-9). Participants who had been enjoying learning English by reading for pleasure began to associate the motivation to read with passing entrance exams for universities, achieving good grades, and their ideal future (Table 4) (RQ 3). As a result, they no longer chose books with 98% known words (Nation and Waring, 2020) or “within the comfort zone” (Day & Bamford, 1998), but they rated challenging books as ‘very interesting’ in their reading records. This also implies that the books they find interesting probably change with the development of the participants’ intellectual level, and although their vocabulary level has not necessarily caught up with the books they want to read, they still do

not find reading books painful. This may be a characteristic motivational factor for Japanese senior high school students (RQ 2, RQ 3). As a point that should be added, a distinctly different tendency was observed for the two male participants who are still enrolled in the program, although it is not clear whether this was an individual or gender difference (RQ 2).

Conclusion

This longitudinal case study aimed to observe long-term learning across elementary, junior high, and senior high schools among participants in an experimental weekly EFL program focusing on extensive reading. Because of the limited number of participants available for long-term observation, the findings of this study cannot be generalized, but hypothetical findings from this study are as follows: 1) Most learners with Japanese cultural and educational backgrounds commonly grow rapidly in reading during junior high school years and then slow down during senior high school years; 2) Learners who begin learning to read earlier spend longer “learn-to-read” periods and may read more and feel less burdened by extensive reading, especially during junior high school years; 3) Among learners who begin learning to read by the third grade, there is no evidence that the earlier they begin, the faster they grow; 4) Female learners tend to prefer books for L1 children to upper levels of graded readers.

Individual learners’ characteristics were more obvious through the combined observation of changes in reading amount, book selection, and emotional factors seen in the participants’ statements. It is considered that learners who read and learn out of more intrinsic motivations show more rapid growth in reading during elementary school and junior high school years, whereas in senior high school years, those

who are influenced by external stimuli in line with their personalities and their ideal future self-images are likely to improve reading and general English proficiency, compared to those who read only from intrinsic motivation.

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