

## A Pilot Study on the Effects of Speed Reading on Japanese Learners of English

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### Abstract

Reading is a fundamental ability in second language acquisition. In order to track improvements in reading speed, the researchers engaged two groups of first year Japanese university students (n=24 and n=11, respectively) in twice-weekly in-classroom speed reading sessions of 45-50 word articles at the students' reading level over a 15-week period. Students' reading speed was self-tracked and recorded and the differences in average reading speed were compared. Initial findings indicate a slight improvement in reading speed, with small differences between ability groups. The results provide support for incorporating extensive reading exercises into the classroom.

### 1. Introduction

Although fluency practice is an important part of an English Curriculum, it can be difficult to implement while maintaining enough time for other curricular priorities. The students in question were focused on success in the EIKEN IBA<sup>1</sup> exam in order to progress to the third year of the English program, while the English department highly valued the development of their critical thinking abilities. Although the researchers wanted to conduct extensive reading, the densely packed Integrated English course allowed scarce time for extra activities. In the middle of the first semester, they determined that it would be feasible to implement a Speed Reading (SR) course as 5-minute routine practice at the beginning of every class. The goals were to increase reading speed in order to pass the high stakes EIKEN exam and also allow for students to gain confidence in their reading via comprehensible input. This speed reading differs from the kind of reading that is common for university preparation such as the *sokudoku eitango* (Kazahaya, 2022), which is based on short readings that include common key vocabulary that is used in university entrance exams. SR, in the context of this study, is similar to the *Speed Reading course* created and used at the Victoria University of Wellington (Quinn, E., Nation, I. S. P., & Millet, S., 2007), in which students read short passages that have the same number of words and the vocabulary level is tightly controlled.

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<sup>1</sup> This is the simplified version of the STEP EIKEN 4-skills exam used by schools and universities as a placement test.

## 1.1 Literature Review

Although speed reading as mentioned in this paper is not new, the seminal paper on the effects of SR was Chung and Nation (2006), which devised three methods to measure the effects of speed reading in an EFL setting in South Korea. Following this study, Macalister (2010) measured SR in an ESL setting in New Zealand and showed that SR can contribute to reading speeds of authentic texts. In Vietnam, Tran (2012) also measured the effects of SR and its transferability to other types of text.

In Japan, Utsu (2003, 2005) was one of the pioneers of SR and conducted SR using *Timed Readings* (Spargo, 1989) which had uniform 400-word passages originally created for native speakers, and the subjects were able to achieve an average increase of 13.3 words per minute in reading speed in the first study. Nekoda (2018) conducted SR using *Reading Power*. Every class, the SR material from the text was scaffolded with a warmup listening practice based on the topic of the reading. A summary of the passage was also created, and students performed activities such as parallel reading and shadowing. Students were well prepared in background knowledge and then underwent the timed readings which resulted in over a 67 words-per-minute (wpm) increase in reading speed over a period of 13 classes.

SR, in the method described in this paper, was conducted in Shimono (2018) in which three groups were compared. One experimental group did SR and repeated oral reading, and the other group did SR only. The two experimental groups had wpm gains of 13-27 words per minute. With only one reading per week, Robson (2019) presented that reading speed could be increased among tourism department students. Milliner (2021) examined reading rates among students that did extensive reading, timed reading, or repeated oral reading. It was found that students that did more extensive reading achieve better reading rates. Most recently, French (2023) examined the effects of a ten minute speed reading activity as a warmup at the beginning of a writing class. Although SR was only conducted once a week, students increase their average reading speed by 31 words per minute.

To evaluate the effects of a weekly SR warmup and change in attitudes toward reading, the following research questions (RQ) are:

1. After one semester of SR, how much can reading speed increase?
2. What are students' attitudes toward SR set at the i+1 level? (Krashen, 1985)

## 2. Methods

### 2.1 Participants

This study was conducted with n=37 students from two classes who were taking an

Integrated English course with a focus on listening and speaking. They were lower level students at the A1 to A2 level. The class met twice a week for 90 minutes for a total of 30 classes. All the students were first year students with eight years of English study from grade 4 to high school. There was no vocabulary test administered before the onset of this speed reading course.

## **2.2 Procedure**

The students used Pathways 1 (Chase, 2018) as the main course text for their listening and speaking activities, and speed reading was conducted using *Yomitore 50* ( Jarrell, et al., 2022) The course consisted of a total of 50 passages that were 45-55 words in length. For the study, students read two passages a week for a total of 15 passages. For each speed reading, the passage was shown on a big screen TV at the front of the classroom, and one of the teachers would display a large digital stopwatch via his PC screen.

At the end of the course, a separate individual online quantitative survey was given to students using Google Forms. Students were given an option to not take part in the study, and a digital consent was given via Google Forms. Students were given the option for the data to be used solely to improve the speed reading course, or to use the data for both improvement of the course and research. A total of N=28 students' data was used for the quantitative follow up study.

## **3. Results**

RQ1: After one semester of SR, how much can reading speed increase?

To answer RQ1, the Average scoring method and Last Versus First scoring method were used according to Chung and Nation (2006). The highest minus lowest scoring method was not used because of excessive variability, perhaps due to unfamiliarity with the procedure or the recording method.

### **3.1 The Average Scoring Method**

Due to sporadic absences and late arrivals, only nine students completed all 15 SR sessions. However, since 17 students managed to complete 12 sessions, we selected only those students for analysis. The first three data points for each student were averaged for a baseline estimate. We selected the tenth through twelfth sessions to calculate the final average speeds. Of these n=17 students, the average starting speed was 125 wpm. The average final speed was

134 wpm, indicating an average gain of 9 wpm after 10-12 sessions. Of these, 11 students increased their speed by an average of 19 wpm, while six students recorded an average loss of 6.5 wpm. (refer to Table 1)

**Table 1.** *First Three Texts vs Last Three Texts Ordered by Percentage of Increase*

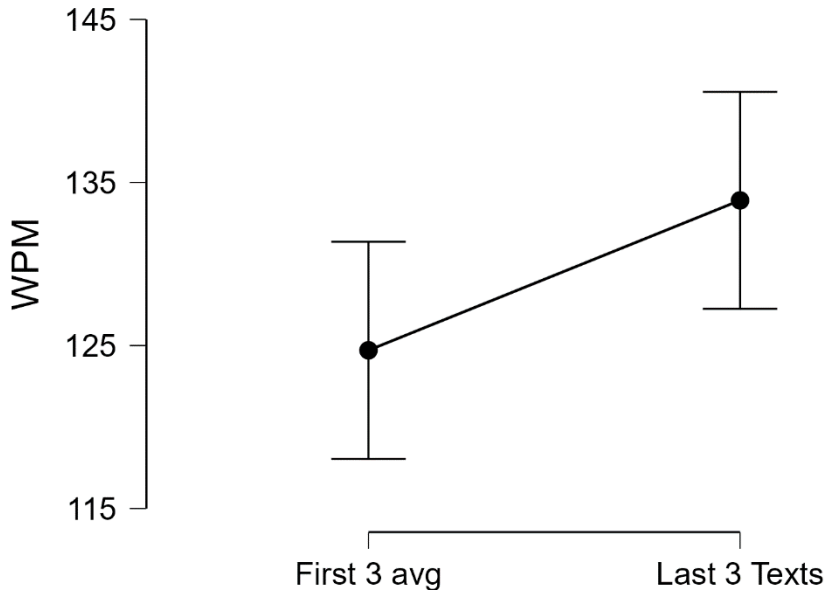
| Student ID | First Three Text Average (WPM) | Last Three Text Average (WPM) | Total Increase/Decrease | Percent Increase/Decrease |
|------------|--------------------------------|-------------------------------|-------------------------|---------------------------|
| 025        | 130                            | 183                           | 53                      | 41%                       |
| 004        | 133                            | 170                           | 37                      | 28%                       |
| 003        | 126                            | 154                           | 28                      | 22%                       |
| 022        | 74                             | 86                            | 12                      | 16%                       |
| 007        | 129                            | 150                           | 21                      | 16%                       |
| 015        | 123                            | 140                           | 17                      | 14%                       |
| 018        | 130                            | 145                           | 15                      | 12%                       |
| 006        | 115                            | 126                           | 11                      | 9%                        |
| 002        | 128                            | 133                           | 5                       | 4%                        |
| 017        | 130                            | 135                           | 5                       | 4%                        |
| 024        | 130                            | 134                           | 4                       | 3%                        |
| 008        | 149                            | 147                           | -2                      | -1%                       |
| 014        | 125                            | 122                           | -3                      | -2%                       |
| 019        | 115                            | 105                           | -10                     | -6%                       |
| 009        | 150                            | 140                           | -10                     | -7%                       |
| 021        | 99                             | 89                            | -11                     | -11%                      |
| 001        | 133                            | 117                           | -16                     | -12%                      |
| Average    | 125                            | 134                           | 9.2                     | 7.5%                      |

Figure 1 illustrates the changes in reading speed for our group of seventeen students after completing twelve sessions of the speed reading course. The "First 3 avg" represents the average reading speed during the initial three sessions (1, 2, and 3), which was 125 words per minute (wpm). In contrast, the "Last 3 Texts" represents the average reading speed during the final three sessions (10, 11, and 12), which increased to 133 wpm.

**Figure 1**

*Descriptives Plot of First 3 Average and Last 3 Average (Words per Minute)*

First 3 avg – Last 3 Texts



The analysis reveals a statistically significant increase in reading speed after the intervention, as indicated by a positive t-value of 2.197.

**Table 2**

*Paired Samples T-Test of Final and Starting Average Reading Speeds*

| Meas.1     | Meas.2    | t      | df | p     | Mean Difference | SE Difference | Cohen's d | SE Cohen's d |
|------------|-----------|--------|----|-------|-----------------|---------------|-----------|--------------|
| First3 WPM | Last3 WPM | -2.197 | 17 | 0.042 | -9.196          | 4.186         | -0.518    | 0.195        |

*Note.* Student's t-test. Statistics calculated using JASP (2024).

On average, reading speed improved by 9.196 words per minute, with a moderate effect size (Cohen's  $d = 0.518$ ), suggesting a practical impact of the intervention. The relatively small standard error of Cohen's  $d$  (0.195) enhances confidence in the precision of the effect size estimate, reinforcing the conclusion that the intervention had a positive and meaningful effect on reading speed.

### 3.2 The Last versus the First Scoring Method

**Table 3.** *First Text vs Last Text Ordered by Percentage of Increase*

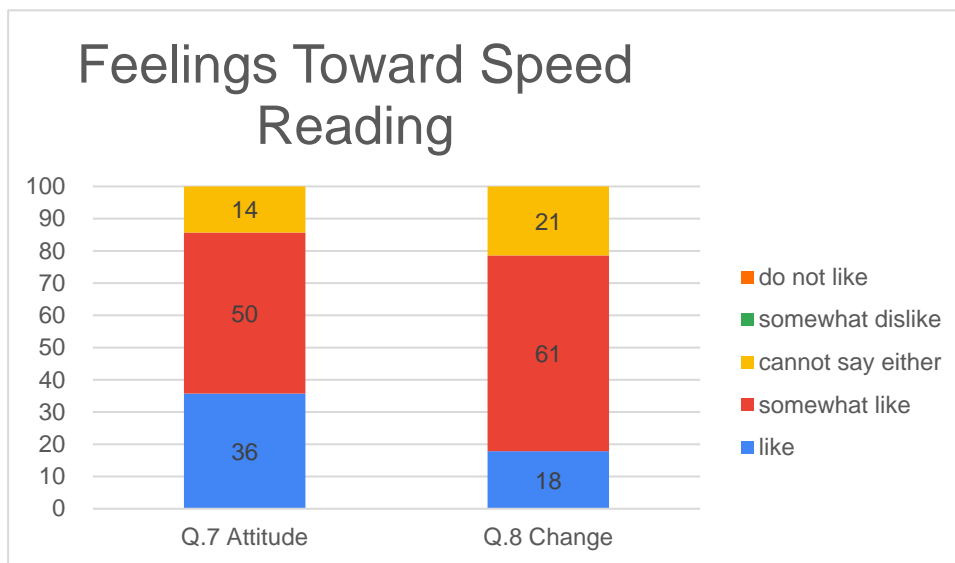
| ID      | Session 1 | Session 12 | Total Change (WPM) | Percent Change |
|---------|-----------|------------|--------------------|----------------|
| 003     | 90        | 165        | 75                 | 83.3%          |
| 025     | 135       | 190        | 55                 | 40.7%          |
| 004     | 125       | 175        | 50                 | 40.0%          |
| 007     | 108       | 135        | 27                 | 25.0%          |
| 001     | 109       | 135        | 26                 | 23.9%          |
| 022     | 77        | 90         | 13                 | 16.9%          |
| 015     | 135       | 150        | 15                 | 11.1%          |
| 018     | 135       | 150        | 15                 | 11.1%          |
| 014     | 135       | 150        | 15                 | 11.1%          |
| 008     | 145       | 147        | 2                  | 1.4%           |
| 006     | 108       | 108        | 0                  | 0.0%           |
| 017     | 135       | 135        | 0                  | 0.0%           |
| 009     | 135       | 135        | 0                  | 0.0%           |
| 002     | 135       | 122        | -13                | -9.6%          |
| 024     | 135       | 118        | -17                | -12.6%         |
| 021     | 108       | 90         | -18                | -16.7%         |
| 019     | 135       | 108        | -27                | -20.0%         |
| Average | 122.6     | 135.5      | 12.8               | 12.1%          |

When comparing only the first and last reading sessions, the overall results were not substantially different from the First 3 vs Last 3 comparison. However, owing in part to the small sample size and possible sources of error, the null hypothesis cannot be ruled out.

RQ2: What are students' attitudes toward SR set at the  $i+1$  level?

Looking at the attitudes towards SR, students were asked, "Q.7 What is your attitude towards SR?" on a 5-point Likert scale ranging from like to dislike. Results showed that 86% of students either liked or somewhat liked the SR activity. (Figure 2)

**Figure 2.** *Feelings Toward Speed Reading.*



|      | N=28 | N=28 |
|------|------|------|
| mean | 4.2  | 4.0  |
| SD   | .7   | .6   |

Furthermore, the change in attitudes towards reading in English was also examined. Students were asked, “Q.8 How have your feelings towards reading in English changed since starting SR? With 5 being Like a lot and 1 being Do not like at all.” 79% of the students responded that they like reading in English a lot, nearly as high as the responses regarding SR in general. (Figure 2)

These findings are encouraging. Regardless of progress in reading speed or lack thereof, no students reflected negatively on either speed reading or on English reading in general.

#### 4. Discussion

At 45-50 words per passage, the reading amount is considerably little compared to the regular 300 word SR course, as an increase in reading speed of nine words a minute was seen using the average scoring method. This is much less than as observed in other studies (Shimono, 2018, French, 2023) but did not run contrary to expectations. The primary goal of the instructors was adding an activity using comprehensible input to give students more confidence in their English, which appears to have been met when judging by students’ self-reported opinions. Judging from the students’ reactions, the instructors decided to implement SR at the 500 word level using Google Forms. We anticipate more significant changes in reading speed

using a more robust course. Additionally, the speed recording method and content used in this brief course allowed for greater sources of error. As passage length varied somewhat between sessions (between 45 and 55 words), we relied on students to locate their time on a chart and to determine their reading speed by themselves, which could result in at minimum a 10% error if choosing an adjacent box, or much greater error if they accidentally reversed axes on the chart. Furthermore, although *Yomitore 50* (Jarrell et al., 2022) is written in a simple manner, the vocabulary is not controlled as strictly as in the SR course developed by the team at the University of Victoria (Millett, 2017). Some difficult words are included with a supplementary Japanese translation which could have slowed some readers, since it is outside of their vocabulary range. Our revised plan will hopefully minimize this error by strictly controlling vocabulary and requiring only accurate time recordings.

Even more important is changing the students' attitudes towards reading. At the beginning of the course, before SR, students had great difficulty in reading the course textbook. After SR, however, a big difference could be seen in students' attitudes towards reading, in contrast to their feelings about the speaking activities. However, through SR, students' attitudes toward reading in English changed and hopefully this will be a catalyst for students to become more independent as readers and to work on their reading outside of class. To that end, the students were introduced to graded readers as a bonus activity during summer vacation.

As mentioned earlier, although the students were seen to have an increase in reading time, the data showed that the times were quite unstable. For future studies, for students of this level, speed reading should be conducted with at least 300-word passages. Also, a control group with students of the same level is needed to compare the difference in change of reading speed. The researchers are currently conducting a follow-up exercise with refinements.

## **5. Conclusion**

This pilot study has shown that even with short 45-50 words passages, a significant increase of reading speed of 12.8 words per minute could be attained. Furthermore, setting the SR at the student's I+1 level resulted in 86% of the students in liking the SR activity. Similarly, 79% of the students liked reading in English after taking part in the SR course. The authors feel that for instructors that have a highly structured curriculum that does not include extensive reading that SR is one activity that can be used to help students to increase reading speed and learn to enjoy reading in English by providing the small successes that the students achieve at the end of the course.



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## Appendix

### Survey Regarding Speed Reading

1. What is your gender? (SA)

|        |   |
|--------|---|
| Male   | 1 |
| Female | 2 |

2. How old are you? (SA)

3. What class are you in? (SA)

|         |   |
|---------|---|
| A class | 1 |
| B class | 2 |
| C class | 3 |
| D class | 4 |

4. What year are you in? (SA)

|                      |   |
|----------------------|---|
| 1 <sup>st</sup> year | 1 |
| 2 <sup>nd</sup> year | 2 |
| 3 <sup>rd</sup> year | 3 |
| 4 <sup>th</sup> year | 4 |

5. How much do you study before class? (SA)

|                      |   |
|----------------------|---|
| 0-14 minutes         | 1 |
| 15-29 minutes        | 2 |
| 30-59 minutes        | 3 |
| more than 60 minutes | 4 |

6. What is your feeling towards the integrated English class? (SA)

|      |   |   |   |           |
|------|---|---|---|-----------|
| Like |   |   |   | Not happy |
| 5    | 4 | 3 | 2 | 1         |

7. What is your attitude towards speed reading? (SA)

|      |   |   |   |             |
|------|---|---|---|-------------|
| Like |   |   |   | Do not like |
| 5    | 4 | 3 | 2 | 1           |

8. How have your feelings towards reading in English changed since starting SR? (SA)

|                |   |   |   |                 |
|----------------|---|---|---|-----------------|
| Like a lot now |   |   |   | Do not like now |
| 5              | 4 | 3 | 2 | 1               |

9. Please tell us your feelings towards the following activities. (MA)

|                  | like | somewhat like | cannot say either | somewhat dislike | dislike |
|------------------|------|---------------|-------------------|------------------|---------|
| Speed Reading    | 5    | 4             | 3                 | 2                | 1       |
| Pathways Reading | 5    | 4             | 3                 | 2                | 1       |
| Odal log         | 5    | 4             | 3                 | 2                | 1       |
| Tasks            | 5    | 4             | 3                 | 2                | 1       |

10. Please tell us your feelings towards the following activities. (MA)

|                  | would like to continue | somewhat would like to continue | cannot say either | somewhat would not like to continue | would not want to continue at all |
|------------------|------------------------|---------------------------------|-------------------|-------------------------------------|-----------------------------------|
| Speed Reading    | 5                      | 4                               | 3                 | 2                                   | 1                                 |
| Pathways Reading | 5                      | 4                               | 3                 | 2                                   | 1                                 |
| Odal log         | 5                      | 4                               | 3                 | 2                                   | 1                                 |
| Tasks            | 5                      | 4                               | 3                 | 2                                   | 1                                 |

11. What do you wish for to make the speed reading activity better? (OA)

12. If there were any activities that you enjoyed in IE1, please tell us. (OA)

13. If there were any activities that you would like in the IE1 class, please tell us. (OA)

14. How can we use the survey data? (SA)

|   |   |
|---|---|
| to improve the class                                | 1 |
| to improve that class or for research/presentations | 2 |