The effects of implementing online extensive reading in the English classroom

Kris Ramonda

Introduction

It is no secret that many Japanese learners struggle to become accomplished and proficient users of English. Though there are a number of factors that contribute to the obstacles that Japanese learners of English face, this article focuses on one: reading fluency. One important aspect of reading fluency is reading speed. Increasing reading speed not only leads to more efficient reading, but it can also improve motivation and enhance comprehension in a second language (see Nuttall, 1996). This helps learners avoid what is known in the literature as the 'vicious cycle of the poor reader' (Nuttall, 1996, p. 127) in which learners overly burden their working memory when attempting to read long and complex sentences with difficult vocabulary and ultimately fail to understand the meaning. This failure in turn discourages students from reading more and the 'vicious cycle' continues.

In a Japanese context, this 'vicious cycle' can be understood in part via an exploration of the washback effect (Shohamy et al., 1996) of college entrance examinations. The washback effect refers to the influence that high-stakes testing has on teaching and curricula. College entrance examinations in Japan typically employ authentic academic articles that include low frequency vocabulary and complex sentence structure. As a result, many high schools have likewise adopted English course books with difficult and academic articles intended to prepare students for the college entrance examinations. In other words, English curricula at the

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high school level appear to focus on intensive reading (i.e. low volume difficult reading) to the detriment of extensive reading (high volume easy reading). While intensive reading most certainly has a place in any well-rounded language-related curriculum, there likewise needs to be opportunities to develop reading fluency through extensive reading (ER).

The benefits extensive reading has on reading fluency are well documented (e.g. Chun et al., 2012; Lee et al., 2015; Waring & Takaki, 2003). Research has found that reading a massive amount of easy material (such as graded readers—short books that draw from high frequency vocabulary and avoid highly complex sentence structures) for pleasure not only lead to increased reading speed (Beglar et al., 2012), but can also promote a positive attitude towards reading in the second language (Arnold, 2009) and thus aid in breaking the aforementioned 'vicious cycle' that afflict many low proficiency learners of English. Yet widespread adoption of ER has not taken a firm hold in Japan. In addition to the washback effect of college entrance examinations, there are some issues related to implementation. Since ER by definition entails reading many books, it can be burdensome for students to purchase them. While libraries with a robust selection of graded readers can eliminate this cost to students, it is problematic to integrate assigned readings into the course curriculum when many students are required to read the same book but there are only a few physical copies of each available.

The challenges of implementing ER in the classroom, however, have recently become much more surmountable. New technological platforms, such as virtual libraries, can be used to more easily integrate ER into course curricula. One such virtual library, Xreading, allows students to subscribe for a flat fee and read as much as they want on a per-semester plan. Not only is this more cost effective for students, but it also allows everyone in the class to read the same material because all of the books are read online. Furthermore, books can be read on any number of devices (e.g. smartphones, tablets, personal computers), so busy students

can more readily access the book content without concerning themselves with having the physical book itself.

Virtual libraries tailored specifically for the second language learner are still in their infancy. Currently, Xreading is the only available virtual library with content from major publishers that is also connected to a learner management system (a system that can track learners' progress, such as their reading speed, time spent reading, books read, and so on). As a result, very little research has been conducted examining the effects of integrating such a virtual library in the classroom. In this study, I seek to fill this research gap by focusing on both reading speed and attitudinal factors gathered by both the learner management system and student survey responses. Specifically, I posit the following research questions:

1) What are the baseline reading speeds of low-intermediate students of English at TUS?
2) To what degree do similar general English proficiency TUS students vary in their reading speeds?
3) What factors impact students' willingness to read?
4) Are TUS students receptive or resistant to online book reading?

The first two research questions on reading speed can provide insight into the approximate words per minute (wpm) speed of first and second year students of English at TUS. Although student populations vary from year to year, there is no reason to think that there will be drastic changes in English proficiency from one cohort to the next. Therefore, having baseline data about how quickly students tend to read easy material in English can aid teachers in determining the appropriate amount of reading homework. The latter two research questions address the interaction between the virtual library, the books read, and affective factors. Although a virtual library can facilitate the implementation of ER in the classroom, it is possible that students are more resistant to reading certain genres of books, or reading books online generally.

Participants

107 undergraduate students at Tokyo University of Science took part in this study. These students were enrolled in first and second year compulsory English classes, which were geared towards low-intermediate and intermediate proficiency level English learners.

Method

The procedure was carried out over the course of a semester and comprised three phases. A description of each phase along with the intended purpose of each is summarized in Table 1 below.

Table 1 — Summary of Treatment Procedure

Timeline	Phase	Purpose	Materials
Week 1	Introduction	● Raise students' awareness about the principles and benefits of extensive reading	In-class article
Weeks 2-14	Extensive Reading	● Improve reading fluency ● Promote a positive attitude towards reading in English for pleasure ● Determine baseline reading speeds ● Collect words-per-minute data for each book	10 books accessed via an online virtual library
Week 15	Survey	● Elicit quantitative and qualitative data on affective factors related to online extensive reading	Online survey

In the first lesson of the semester, students read an in-class article about the potential benefits of extensive reading. As many students in the class had never been exposed to the concept of ER in a second language, it was important to raise awareness about how it could help improve their English. In this way, students would more clearly understand the purpose of ER as part of the class curriculum and it could further motivate them to read the assigned books. Following this, students also were given a simple tutorial on how to use the main functions in Xreading.

During weeks 2-14, students read approximately one book per week for a total of ten books. Each book was approximately 4,000-5,000 words in length and was read outside of class as a homework assignment. Furthermore, the books I chose came from the same series (Cengage's *Page Turner* series) as these books tended to be well received by Japanese students (they were mostly dramas related to the lives of young college students) I had previously taught. In order to check that the students read and comprehended the gist of the book contents, I held quizzes at the start of each class. These quizzes were composed of five multiple-choice general comprehension questions, and were intended to measure broad understanding of the book contents. In other words, if students completely read the book and understood the main points of the story, then they should have little difficulty passing the quiz.

At the end of the semester, students completed an online survey in which they were asked a series of questions related to both their experiences reading online in general and their attitudes towards and opinions on reading specific books. The survey question format varied, but most elicited both quantitative and qualitative data. See Table 2 below for a summary of the survey question items.

Table 2—Survey question items

#	Question Item
1	Overall, how was your experience reading online on Xreading?
2	Overall, what did you think about the contents of the 10 books we read on Xreading?
3	Overall, what effect did reading the 10 books have on your reading speed?
4	How does Xreading as a homework assignment compare with other types of English homework?
5	Which book did you like the most?
6	Which book did you dislike the most?
7	Please rate the 10 books based on how easy they were to read.
8	Please rate the 10 books based on how enjoyable they were to read.

In addition to the survey data described above, I also compiled the data from the learner management system in Xreading. The virtual library in Xreading has a build-in function that automatically calculates an approximate reading speed for students. It does this by dividing the total number of words in the book by the number of minutes it takes for students to finish reading it. For example, if it takes a student one hour to read a 5,000-word book, then that student's reading speed would be approximately 83 words per minute. It is important to keep in mind that this method of calculating reading speed has limitations. Perhaps the most obvious is that there is no means of guaranteeing that a student is reading continuously the entire time a book is being accessed online. The student could stop to look up the meaning of a word, or otherwise become distracted. Furthermore, as all reading was done for homework, there was no manner of monitoring the students as they were reading in order to check whether any interruptions occurred. A second limitation is that if students skim through the book at first before reading at a more deliberate pace, the virtual library would record only the initial read-through. This had the effect of artificially inflating the reading speed of students who used an initial skimming strategy.

I decided to deal with these limitations by eliminating students from the quantitative analysis if they exhibited 1) erratic wpm values or 2) extremely high wpm values that went beyond the speed at which even native speakers typically read. I defined erratic wpm values as those that were either more than double or less than half the average reading speed across all 10 books for an individual student. For example, a student whose average wpm value for the 10 books was 80 would have values excluded for any individual book in which he or she read at fewer than 40 wpm or greater than 160 wpm. Though some wpm variation was expected as the genre, content, and level of the 10 books were different, such a great degree of variation (as defined) was much more likely the result of non-continuous reading or skimming. As for cutting extremely high wpm values, the process was even more straightforward. Any

student whose wpm value was above 200 was cut. I chose this cutoff point because students in this study were at a low intermediate to intermediate level proficiency, and it is reasonable to assume that the great majority of readers at that level would read at no where near the speed of 200-300 wpm of native speakers (see Grabe & Stoller, 2002).

One final and essential consideration is comprehension. This is because I take it for granted that any wpm value is only meaningful to the extent that the student actually understands what he or she reads. It is possible that some students, in an effort to finish as quickly as possible, read too hastily to understand the story well enough. In an effort to mitigate this limitation, I cross-checked all in-class book quizzes and eliminated any students from the quantitative analysis who failed to demonstrate at least 60% comprehension on more than 2 out of the 10 book quizzes. There were also some students who were eliminated due to either not reading and/or being excessively absent and missing quizzes.

In sum, I have taken a number of measures to rein in some of the possible confounding variables when measuring reading speed through the virtual library's build-in wpm function. Though 107 students initially partook in the online reading and quizzes, only 37 students, whom I am calling 'reliable readers', were included in the quantitative analysis in the section that follows. As a reference, I have summarized the 'reliable readers' below:

The 'reliable readers' included in the quantitative analysis of reading speed:
1) read the book and passed the quiz for at least 8 out of the 10 assigned books
2) showed no evidence of non-continuous reading
3) showed no evidence of initial skimming

Results and Discussion

The quantitative data derived from Xreading's learner management system consist of the average wpm reading speeds of the 37 'reliable readers' and other associated descriptive statistics. This data is presented in Table 3 below.

Table 3―Descriptive statistics for words-per-minute reading speed by book
N=37

	Book 1	Book 2	Book 3	Book 4	Book 5	Book 6	Book 7	Book 8	Book 9	Book 10
N	37	37	37	37	37	37	37	37	37	37
Mean	74.4	75.0	67.1	79.5	72.6	64.8	73.5	77.6	78.0	73.7
Median	68.0	79.0	60.0	79.0	70.0	62.0	66.0	78.0	77.0	72.0
Std.	28.5	24.4	28.4	28.8	27.2	27.9	29.8	27.6	20.3	26.2
Range	152	122	107	148	129	109	110	122	95	109
Min.	32	29	32	19	23	24	25	27	37	24
Max.	184	151	139	167	152	133	135	149	132	133

There are a few noteworthy observations that can be gleaned from Table 3 above. Firstly, there are no seemingly substantial differences in average reading speed between most of the books. This means that in spite of some books being higher level than others (as determined by the number of headwords), this did not seem to greatly impact the speed at which students read. As all 10 books were within the first few levels of the book series, there could be a ceiling effect that washes out any differences until a certain threshold of reading difficulty is reached.

A second and more important observation is the surprising standard deviations across all of the books. This shows that students read at greatly different speeds. Extreme cases can be noted in some of the minimum and maximum range values in which the fastest reader read approximately 5-6 times faster than the slowest reader. Moreover, the standard deviations reveal that this gap in reading speed was not limited to a few outliers. In fact, the data show that students within one standard deviation (68% of participants, or 25 of the 37 students) from

the mean read at a speed of about 50-100 words per minute. This finding has important teaching implications and is revisited in the conclusion.

Results from the online survey included both quantitative and qualitative data. The quantitative data has been reproduced below, though I will draw from qualitative data in the discussion in order to elucidate some of the meaning behind the numbers. Though there were 107 initial participants in the study, seven were eliminated either due to being absent on the day of the survey or electing to keep their responses private.

Table 4—Student preferences for online reading

N=100

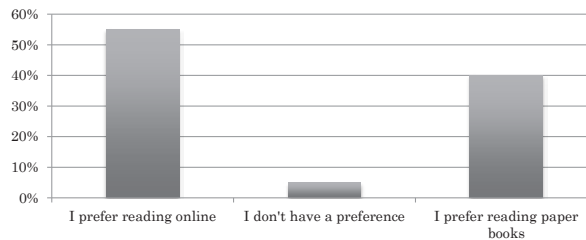**Overall, how was your experience reading ONLINE (smartphone, tablet, PC) on Xreading?**

Table 5—Student overall enjoyment of book content

N=100

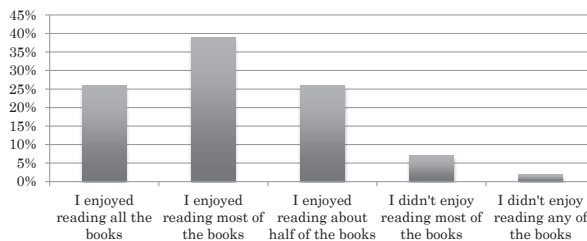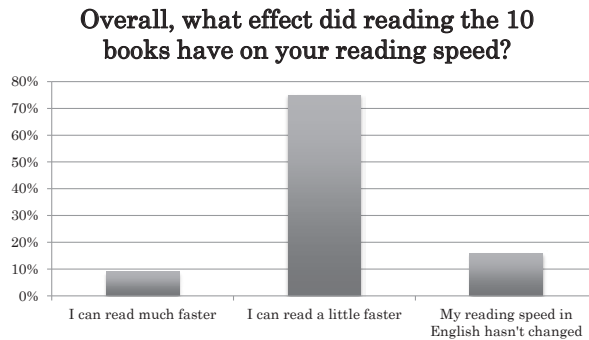**Overall, what did you think about the contents of the 10 books we read on Xreading?**

Table 6—Student perceived changes to reading speed

**Overall, what effect did reading the 10
books have on your reading speed?**

The data in Tables 4, 5, and 6 offer fairly encouraging signs of positive overall student perceptions about online extensive reading. Table 4 shows that a slight majority of students prefer online reading while a sizable minority of students prefer reading from a physical book. After inspecting individual student comments, it became evident that most students preferred online reading due to the convenience of being able to read anywhere, such as on the train or bus. On the other hand, others preferred physical books because they suggested it strained their eyes less than reading from a screen. However, a few respondents preferred reading physical books because throughout the semester there were a few incidents in which the Xreading server was down for maintenance and students were unable to access the books. Had there been no technical interruptions it is possible that even a greater number of students would have preferred online reading.

The data from Table 5 relate specifically to the contents of the books, and the results were also quite positive. Over 90% of respondents reported to have enjoyed at least half of the books, and nearly two-thirds of respondents either said that they enjoyed most of the books or all of them. It should not be ignored, however, that roughly 9% of students did not appear to enjoy reading the assigned books. After scrutinizing many

respondent comments, the prevailing and unsurprising finding was that most of the stories were found to be easy to read and interesting. The few respondents that appeared to dislike the assigned books preferred reading more academic texts or just did not enjoy reading in English more generally.

Lastly, Table 6 reports on perceived changes to students' reading speed. According to the data, the great majority of students indicated that they perceived slight increases to how quickly they read. Interestingly, the wpm data from Xreading's learner management system of 'reliable readers' (Table 3) does not show any meaningful increases in reading speed over the course of the semester. This wasn't unexpected, however, as reading speed develops incrementally and slowly over time. Also, learners began with the lowest level books and gradually moved on to slightly higher level books by the end of the semester, so it is possible that any slight increases to reading speed were mitigated by likewise slight increases in book difficulty. Even though it appears that the reading volume in this study was insufficient to promote reading speed gains over the course of a semester, it is important to recognize that students perceived a slight improvement. Such a perception is likely to have a positive effect on motivation as it gives students a sense of progression.

Limitations

Upon reflecting on the design and implementation of this study, I have identified a few possible limitations that might have impacted the results. Firstly, the series of books I selected did not comprise a single level of graded readers. This means that the number of headwords varied slightly from book to book and therefore some books might have been more difficult than others in terms of vocabulary. Secondly, though students' responses were quite positive, it is possible that they were aware of my own attitude towards extensive reading, and this could

have contributed to an observer-expectancy effect. That is, given that I provided students with information on the benefits of ER in the first lesson of the semester as part of the awareness raising activity, they could perceive that I viewed ER favorably and this may have skewed their responses in a more positive light.

Conclusion

This study examined the impact that the online reading of graded readers has on student reading speed and attitudes towards reading in English. Specifically, I sought to answer four research questions that will help to inform the future direction of curricula in the TUS English program. The first two questions relating to reading speed were intended to provide insights into baseline data and variation of reading speed among first and second year TUS students. The data showed that among the lower streamed students in the English program, the average reading speed is approximately 75 wpm for relatively easy reading material in English. The important caveat to this is that the remarkable standard deviation between students indicated that reading speed varied substantially, and for this reason teachers should carefully consider this when assigning reading homework or selecting texts for in-class reading. In some extreme cases, the fastest readers in a class read at a rate many times faster than the slowest readers.

The latter two research questions addressed student affective factors related to online reading generally as well as the books I selected specifically. These results were encouraging, as the data from respondents revealed that most students preferred reading online to reading physical books. This should be viewed as a welcome finding as online ER is much easier to integrate into course curriculum than is ER with a physical library of books. With the advancement of technology, it is probable that virtual libraries with learner management systems will continue to improve with time and become even more accessible with

increasingly useful functions in the future. In terms of the factors that influenced students' willingness to read, the results are less clear and more subject to individual differences. Overall, however, the majority of students enjoyed reading most of the assigned books, and thus online ER could be a possible avenue to offer reading fluency practice to students in the TUS English program.

References

Arnold, N. (2009). Online extensive reading for advanced foreign language learners: An evaluation study. *Foreign Language Annals*, 42 (2), 340-366.

Beglar, D., Hunt, A., & Kite, Y. (2012). The effect of pleasure reading on Japanese university EFL learners' reading rates. *Language Learning*, 62 (3), 665-703.

Chun, E., Choi, S., & Kim, J. (2015). The effect of extensive reading and paired-associate learning on long-term vocabulary retention: An event-related potential study. *Neuroscience Letters*, 521(2), 125-129.

Davis, C. (1995). Extensive reading: An expensive extravagance? *ELT Journal*, 49 (4), 329-336.

Grabe, W., & Stoller, F. L. (2002). *Teaching and researching reading*. Harlow, UK: Pearson Education.

Lee, J., Schallert, D. L., & Kim E. (2015). Effects of extensive reading and translation activities on grammar knowledge and attitudes for EFL adolescents. *System*, 52, 38-50.

Nuttall, C. (1996). Teaching reading skills in a foreign language. Oxford, UK: Heinemann.

Shohamy, E., Donitsa-Schmidt, S., & Ferman, I. (1996). Test impact revisited: Washback effect over time. *Language Testing*, 13 (3), 298-317.

Waring, R., & Takaki, M. (2003). At what rate do learners learn and retain new vocabulary from reading a graded reader? *Reading in a Foreign Language*, 15 (2), 130-163.

The effects of implementing online extensive reading in the English classroom

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Abstract

The benefits of extensive reading (ER) to second language learners are well known. However, there has not yet been widespread adoption of ER in the classroom. This is partly because graded readers are costly and challenging to implement into curricula (Davis, 1995). One solution is to introduce an online 'virtual library' of graded readers so that students can have unlimited access to simplified reading material. To date, however, few studies have examined how students benefit from online extensive reading.

To fill this research gap, I introduced a virtual library of graded readers to students (N=107) over a semester. At the end of the semester, students evaluated the usefulness of online extensive reading. In this study, I triangulate findings from the data provided by the online extensive reading tools with self-reported gains perceived by students. I also discuss some of the broader implications of implementing online extensive reading for both research and pedagogy.

　第二言語学習者にとって多読が有効であることはよく知られている。しかしながら、実際の授業で多読がそこまで広く採用されていないのが現状である。その理由としては、「段階別読本」が高価であるとともに、カリキュラム編成に伴う難題の多いことが挙げられる（Davis, 1995）。この問題の解決策は、段階別読本をオンラインで利用する「仮想図書館」を導入することである。これにより、学生は無制限かつ容易に多読教材へアクセスできるようになる。しかしながら、このオンライン多読によって学生がどのように反応をして成果をあげるのかを吟味した先行研究はない。

そこで、東京理科大学の英語の授業において「仮想図書館」を導入した。具体的には、週一冊の多読の課題を学生に課して、その内容の理解度を授業内の小テストで確認した。その上で、独自の調査方法を通してオンライン多読の有用性を評価した。

　本研究では、オンライン多読のツールおよび授業内での小テストを、学生の自己報告による達成度と連動させて得られるデータから調査結果を測定するとともに、オンライン多読が研究および教育学にもたらす含意をいくつか検討する。