

Extensive graded reading with engineering students: Effects and outcomes

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Abstract

Extensive graded reading (EGR) was carried out with a cohort of 600 engineering students in a university in northern Japan. Pre-and post-surveys were conducted to discover changes in the general reading habits of students, their attitudes toward the assessment method and how goals changed over the course of study. The first survey was carried out in week 2 of the 15-week course and the second in week 13. An analysis of changes showed that EGR was generally well accepted, that students' perceptions of studying English seemed to improve, that students spent a little less time on recreational reading to compensate for the increases required in the EGR course and that most read considerably more running words than their initial goals. In addition, the results suggest that the short MoodleReader quiz format used for assessment was also generally well received by students. Implications for teachers using EGR are discussed.

Keywords: Extensive graded Reading, English as a Foreign Language, MoodleReader, L2 reading

It is essential for students studying engineering, and other sciences, to have a firm understanding of English. English is generally considered the language of science and engineering in the modern world. Montgomery (2013) noted that between 80 and 90% of research published in scientific fields is written in English, but this enormous amount of important information is often inaccessible to non-native speakers. Tertiary institutions in Japan and other countries, where English as a foreign language (EFL) is taught, want their students to have better English reading ability in order to access the latest research. Yet students often have little time to spend on English and those studying engineering already have a great deal of engineering related material to study to complete their degree. Improving reading in a foreign language is both difficult and time consuming. Competition for students' time is fierce and engineering faculty at universities are often wary of anything that takes too much time away from their students. Ensuring students acquire the required English reading skills without adversely affecting their engineering studies is a balancing act. This study shows that extensive graded reading (EGR) can play an important part therein.

Extensive Graded Reading

Extensive reading (ER) has been described by Bamford and Day (2004) as, “an approach to language teaching in which learners read a lot of easy material in the new language. They choose their own reading material and read it independently of the teacher. They read for general, overall meaning, and they read for information and enjoyment” (p. 1). They include “easy material” in this definition, and it is often the case that graded readers are used in extensive reading courses for foreign language (FL) learners. Graded reading (GR) is defined by Nation and Wang (1999, p. 356) as reading “books which are specially written or adapted for second language learners. This involves severely restricting the vocabulary that can occur, controlling the grammatical structures that can occur, and matching the length of text to the vocabulary and grammar controls.” It follows that if students read many graded readers they are participating in EGR.

It has been well documented (Day & Bamford, 1998; Takase, 2007) that many FL learners are initially unenthusiastic when it comes to reading in the second language (L2). Graded readers can reduce the anxiety felt by L2 learners by presenting simple but engaging stories for them to read. If the amount of this reading increases, that is, it becomes extensive in nature, then the benefits of EGR include improved vocabulary size (Ponniah, 2011; Waring & Nation, 2004), more accurate syntax both in written and oral production skills (Cho & Krashen, 1994; Nation, 1997), and increased confidence in the use of the FL (Iwahori, 2008). Improvements in reading fluency have also been shown by Beglar and Hunt (2014) and Huffman (2014). Regarding students’ motivation to read, Takase (2012) noted that ER benefited a variety of different learners from low level to higher level students. Many of these benefits have been seen in English for Specific Purposes (ESP) situations such as engineering (Nishizawa, Yoshioka & Fukada, 2010; Poulshock, 2010). It is therefore easy to see why EGR would be considered an essential part of any EFL program.

However, the term “extensive” may engender fear in some because it suggests that the reading will take up a lot of time; time that could be better spent on other ways of learning vocabulary (Laufer, 2003) and studying materials related to the students’ majors. This is particularly so when EGR is in competition with the engineering students’ majors. Others may also feel that it is difficult to grade ER without giving comprehension tests – something that proponents of ER suggest is not ideal. As Murphy (2010) pointed out, ER, being a receptive skill, is also often perceived as being less popular with students of a foreign language than the more active skills such as oral communication. This paper attempts to allay some of these fears.

Background and Setting

Many tertiary institutions throughout Japan are under some pressure to improve their students’ TOEIC scores. The institution where this study was carried out is in a similar situation. When it came to developing a new curriculum there, increasing students’ TOEIC scores was one of the goals, and a number of recommendations were made to achieve this aim. One recommendation was to harness the benefits of EGR by increasing the amount of English that engineering students read. This was implemented by creating an EGR program. A graded reader library was set up in the university library and MoodleReader installed onto the university learning

management system. Graded readers from a variety of publishers were bought and placed in the library using a color-coding system that showed clearly within which MoodleReader level each book was placed. Students were therefore able to cover five of the top six core principles outlined by Day (2015). However, as students were doing this for a grade, one could not state that “the purpose of reading is usually related to pleasure, information and general understanding” (ibid).

To evaluate how the EGR program would impact the students involved, this study tried to gauge the following:

- Q1. How did the EGR program affect the reading habits of students?
- Q2. Did the EGR program affect the students’ attitude toward English and if so, how?
- Q3. What were students’ overall impressions of the EGR program, and how did students’ reading goals change?

Participants

The compulsory EGR course was for 600 second-year students of engineering. The students were from four departments: applied science, architecture, information technology, and mechanical engineering. Depending on which department they were in, there was some variation in their English levels. Generally, the students in the architecture department had very limited English ability whereas students in the mechanical engineering department were pre-intermediate or intermediate level. The applied science and information technology students’ level was between those two. As with almost all Japanese students, these students had completed six years of English study through junior and senior high school, but the students at this particular university often come to it because there is no English entrance exam. Their motivation to study English is overall very low. Prior to this reading course at the university, the students had taken a general English class in their first year and done some basic TOEIC training too.

During the course, students were required to read a minimum of 30,000 words for a passing grade and over 150,000 words for a maximum grade. Scaled grades were given for greater than 30,000 words up to the full grade for 150,000 words or more. Students could choose from an extensive selection of graded readers in the library, and, after reading a book, they would take the associated MoodleReader quiz to demonstrate that they had in fact read the book. This system cumulatively counts the number of running words read, as opposed to standard words read (Carver, 1982), so that, at the end of the course, teachers could easily see how many books and words each student had read. Students could read both in and outside of class before taking the quizzes. MoodleReader has quizzes for all the most popular graded readers. The quizzes are very simple, so students who have read the book are easily able to pass the quiz. In many respects, the quizzes are an extension to extensive reading in that they are usually written at the same language level as the book. There are generally four question types that make up the quiz: three multiple choice questions, two “who said” questions, four true and false questions, and an ordering-type question where students have to put the events outlined into chronological order. There is a total of ten questions that are randomly generated from a bank of 20 to 40 questions. An example of some of the questions is included in Appendix C.

Methods

Pre- and post-course surveys were carried out using the Moodle questionnaire module to discover any changes that occurred in the reading habits of the students, their attitudes to being quizzed on the books they had read, and how their reading goals changed over the course of study. The first survey was carried out at the beginning of week 2 of the 15-week course. This was before most of the main reading had started. The second survey was carried out two weeks prior to completing the course when most of the students should have been busiest reading or had already finished the reading requirement. The survey was custom-made for this program but used elements of Shafi and Loan's (2010) surveys on reading habits. Actual word counts were exported from MoodleReader at the end of the course to compare with students' initial reading goals. The results from the surveys were exported to a csv file. The information from the csv file was then transferred to SPSS version 22 for Mac.

Each of the survey's constructs were examined by only one question, so scale reliability tests are not applicable. The first part of the survey (Appendix A) asked students how long they spent reading a variety of different materials. The second part asked questions relating to the students' appreciation of English, and there was also an open-ended question at the end to gather general feedback. All but one of the distributions of differences between the scores on the pre- and post-tests for each of the constructs were symmetrical. The one that was different will be discussed in the results section. Survey responses were given via an ordinal Likert scale where pre- and post-responses were matched using the Moodle questionnaire module. Hence, mean scale scores for pre- and post-testing of each construct could be used. The significance of difference of these was checked using the non-parametric Wilcoxon signed-rank test for hypothesis testing of repeated measurements on a single sample. The second questionnaire asked the same questions as the first, but another section was added to the second (Appendix B) that asked a variety of questions regarding the course. These questions generally were not directly related to the graded reading but rather to the MoodleReader and overall information on the course. Responses were given via a Likert scale.

The surveys were voluntary. The n -size for the first questionnaire was $n = 398$, and for the second questionnaire $n = 297$, with both pre- and post-questionnaires being completed by $n = 233$ participants. This paper uses $n = 233$ for its pre- and post-analysis. However, for the analysis of the post-questionnaire Likert scale information relating to the third research question, all the data from the 297 students that completed that questionnaire are included.

Results

Effect on reading habits

Results from the Wilcoxon signed-rank tests are outlined in Table 1. They show the changes in reading habits for the various reading materials outlined. Some of those changes were statistically significant $p < 0.05$ (Burns, 2000). There was a statistically significant decrease in

the reading of comics, newspapers, and other English books. There was an increase in the reading of study materials, but this was statistically insignificant. Reading of other materials showed a slight decrease, but this was statistically insignificant too. As with study materials, reading online also showed a statistically insignificant increase.

Burns (2000, p. 166) stated, “measures of effect size reflect how large the effect of an independent variable was.” Although the results here show some statistically significant changes, when the size of the sample is considered, effect size also needs to be examined. In these examples the effect size is almost always very small ($d < 0.2$, Cohen, 1992, cited in Burns, p. 168), though for changes to reading of other English materials it had a marginally medium effect ($0.2 < d < 0.5$, Cohen, 1992, cited in Burns, p. 168).

Table 1. *Effect on reading habits*

Type of reading material	Pre mean score	Post mean score	Change in mean	Cohen's d	Z (based on medians)	Asymp. Sig. (2-tailed) p value
Reading of comics	3.47	3.60	0.13	0.11	-1.94	0.047
Reading of novels	3.91	3.96	0.05	0.04	-0.82	0.41
Reading of newspapers	4.33	4.45	0.12	0.12	-1.97	0.048
Reading of the Internet	3.00	2.90	-0.10	0.07	-1.12	0.26
Reading of other English books	4.14	4.43	0.29	0.30	-4.45	0.000009
Reading of texts / lecture notes / study material	3.38	3.28	-0.10	0.08	-0.94	0.35

Effect on appreciation of English study

Results from the Wilcoxon signed-rank tests are outlined in Table 2 below. Changes in student attitudes to English in addition to changes in the perceived and actual word counts can be seen. A statistically significant improvement in students' appreciation of English was observed whilst there was no significant change in students' feelings toward their future need for English nor their perceived need to read English books. They also did not feel any need to read purely engineering-based English books. As above, the effect size is generally small except for the change in amount read where it moves into the medium range.

Students were given the word count required for a passing grade and to attain the various grades above that. They would have therefore known the number of words they needed to read to attain the grade they wanted, and the time frame they had to do so. As the grade would affect their overall GPA, there was extrinsic motivation to read an amount that would improve their GPA. Thus, their initial reading goal should have been quite high. The actual number of words read, though, was significantly higher (on average, 10,000 words more) than the students' initial goals. This result is the one that showed a non-symmetrical distribution because of this positive skew to a higher average number of words read.

Table 2. *Student attitudes to English and word count changes*

Attitudes / Goals	Pre mean score	Post mean score	Change in mean	Cohen's <i>d</i>	Z (based on medians)	Asymp. Sig. (2-tailed) <i>p</i> value
Likes English	2.76	2.67	-0.9	0.11	-1.964	0.049
Future need of English	2.99	2.96	-0.03	0.04	-0.585	0.558
Need to read	1.92	2.00	0.08	0.11	-1.178	0.239
Want for engineering books	3.01	2.94	-0.07	0.04	-1.543	0.123
Word count change	3.27	3.64	0.37	0.26	-4.147	0.000034

Post survey questions

A majority (58.9%) of the 297 students that answered the second survey believed that the EGR program improved their understanding of English; with many more believing it was beneficial to their study (83.5%). They enjoyed seeing their word counts increase via the MoodleReader system (87.2%). A large majority (73.1%) also felt that it did not increase their dislike of English. The wording of this question could have been better but this result backs up the result of the pre- and post-questionnaire that showed students seemed to like English more after the course. The number of students that had positive versus negative feelings toward quizzes being supplied for the books read were almost equal, though a small majority (54.5%) believed quizzes should be included in the assessment of their reading. Sixty three percent of the students stated they were nervous when they came across new words, with a sizable majority (87.5%) stating they often came across words they didn't know during the program. Though it is understandable that students came across new words, this figure reinforces the importance of explaining to students that they need to read extensively at a level below their present one. In addition, 65.4% of students stated that the program per se did not give them more confidence in their overall understanding of English. A larger majority (70.4%) stated they would not continue with EGR after the course finished. As they were all non-English majors, this is understandable though disappointing. Due to the importance of EGR, the school where this study took place is considering extending the length of the program.

Table 3. *Post survey only questions*

	sum of “absolutely” and “basically think so”	mean	Standard deviation	median
I think my overall understanding of English improved due to the extensive reading program.	175/297 (58.9%)	2.43	0.719	2
I came to dislike English more because of this extensive reading program.	80/297 (26.9%)	2.88	0.813	3
If I have to read English books for class, there should be quizzes on the books read.	144/297 (54.5%)	2.60	0.813	3
The extensive reading program was beneficial to my study.	209/297 (83.5%)	2.24	0.782	2
After finishing this class, I will continue extensive reading.	77/297 (29.6%)	2.98	0.782	3
I felt very nervous when I came across new words in the extensive reading.	139/297 (63.0%)	2.50	0.916	3
Due to this class I became more confident with English.	94/297 (34.6%)	2.82	0.742	3
I enjoyed seeing my word count increase.	200/297 (87.2%)	2.23	0.887	2
I often came across words I didn’t understand during extensive reading.	197/297 (87.5%)	2.16	0.803	2

Open-ended question

The open-ended question was “If you have a comment or a request regarding the extensive English reading program, please tell us.” The responses to this question were broken into 5 groupings: “system problems”; “positive comments”; “level problems”; “borrowing book problems”; “general comments” and “no extra comments.”

Table 4. *Open-ended questions*

System problems	16
Positive comments	53
Level problems	37
Borrowing book problems	17
General comments	19
No extra comment	155

The comments were all written in Japanese and the translations here were done by the author who has lived in Japan for 24 years and whose Japanese language skills are well developed. There were 16 comments relating to the system used. Due to the institution's policy of not upgrading throughout the year, the version of MoodleReader that was used had some bugs. The vast majority of the comments here were related to those while a few related to the online

dictionary that we set. To ensure all students had access to the same online dictionary a link to it was included in the Moodle course. There were 53 positive comments ranging from “I did not know English study could be so enjoyable” to “I was happy that I could read a variety of different genres” and “this was an effective way to improve my English.” The number of comments relating to the levels of the books and how we set those was 37 in number. Many of these focused on the students’ desires to read books at a higher level. At the beginning of the course the instructors tried to explain the reasoning behind EGR but this, perhaps, was not enough for these students. A clear explanation of the pedagogical reasoning behind EGR should perhaps be a prerequisite for students taking such a course. There were some negative comments on the fact that the system would not allow students to read books too far below their level – something the updated version allows. There were 17 comments based around the ability of students to borrow books. Instructors gave clear guidelines at the beginning of the course that students should only borrow one book at a time and, after completing the quiz, return the book to the library and then borrow another. However, the library staff informed us that many students were borrowing more than one book at a time and the library rules could not be changed to stop this. Hence there were some problems with students not being able to borrow books at their level. Some other comments in this section revolved around the system we had created for the levels. We had color-coded the books so that each level had its own color. Unfortunately, a few books were wrongly color-coded and this understandably caused problems for students. There were 19 general comments. These were varied. A few mentioned they would have liked the reading to be tied to communicative tasks. As Brantmeier (2005) found that students were less anxious when faced with post-reading written tasks, it is important to ensure the reading being done by students is, in some way, connected to other tasks. This is an important aspect of curriculum design and should be incorporated in to both the ongoing project and any other projects that use EGR. Others mentioned the difficulty of reading the required number of words to attain a top grade, whilst others asked for specific books to be added to the library. There were 155 “no extra comments.”

Discussion

These results go some way to answering the research questions posed. Each will be discussed here.

Q1. How did the EGR program affect the reading habits of students?

Faculty in the various engineering departments at the university where this study was carried out had mentioned to the author on a number of occasions that they thought there was too much English homework for their students. Any subject with “extensive” in its title may be thought of as requiring a lot of time. Particularly at institutions where the students are not English majors, faculty may balk at introducing something called “extensive reading.” They assume there has to be a trade-off between the extra work involved in reading extensively and other reading. This study was based on students’ self-reporting and thus has some limitations, but the results here show that an EGR course asking students to read an average of 80,000 to 85,000 words did not adversely affect students’ ability to carry out other academic readings. Perhaps due to the increased load of EGR, however, students reduced the amount of time they spent reading comics

and some other recreational materials.

There was a large reduction in the amount of other English material read. As these students were only second year students, few, if any, would have been given English reading materials from their teachers of engineering at the time of the questionnaires. Unfortunately, the study did not permit students to specify what other English material they discarded to allow for the increase in EGR, and should have, but it is highly unlikely that the other English reading material students gave up was related to their majors. The benefits of EGR expounded in the introduction section would suggest EGR is more beneficial for the students' English language development than the other English materials that students stopped reading. We hope the EGR course is, in fact, encouraging students to focus on EGR and moving them away from less useful forms of English reading. More research into what English reading was being carried out would assist in having a fuller understanding.

Students increased the amount of time they spent reading study materials over that time. However, considering that the second survey was taken just prior to students' end of semester exams, this cannot be attributed to the EGR course. If this reading time for study materials had declined, however, it would show that the course had had a detrimental effect on students' reading of the material related to their majors. Another point that should be taken into consideration is that there was not a single comment in the post-survey open comments section stating that the EGR course workload was onerous – something one would expect if it were overly time-consuming. In this author's experience teaching other courses, students have made known in post-course surveys when they thought the course workload was too high. No such comments appeared in this survey. To fully understand whether the course was overly onerous, a direct question, such as "Did the EGR program adversely affect your studies?" should have been asked in the post-survey questionnaire. However, from the fact that no comments were made stating that it was burdensome, one might be able to infer that it was not overly time-consuming.

Q2. Did the EGR program affect the students' attitude toward English and if so, how?

The concept posed in the survey was simply "I like English" with students choosing a response from a scale ranging from "1. I absolutely think so" to "4. I absolutely don't think so" (Appendix A). This question (or variations on it) has been used in previous studies (Eguchi & Eguchi, 2006; Pan, Zang & Wu, 2010) to gauge students' attitudes to English. The statistically significant increase in the favorable view of English after taking the course would suggest that EGR had a slightly positive effect on students' attitudes toward English. Admittedly the effect was small but it is still noteworthy. The positive responses to the open-ended question also lend credence to this, in addition to the post survey figure that indicated that a large majority (83.5%) believed the EGR program was beneficial to their English study.

Students maintained an awareness of the importance of English and did not see the EGR course as being less meaningful in relation to their majors. This can be seen by the lack of change in attitude toward students' needs for reading English materials to improve their language skills, and the lack of change in their perceived need to read English material related to their majors.

Q3. What were students' overall impressions of the EGR program, and how did student goals change?

Although the figures do not allow a definitive answer, it can be stated that students' impressions of this particular EGR program were, if not generally positive, then not averse to it. Students at the university where this study took place have to take English classes to graduate. The students understand this and the basic need for English in their curriculum, but, as mentioned above, they generally have very low motivation when it comes to English. They want to do as little as possible to pass. The educators here want to give them the best opportunity to improve their English skills without taking too much time away from the study of their majors. In the post survey, there were a reasonable number of positive comments, but there were no comments stating the program took time away from other subjects' reading time. The vast majority of students made no actual comment on the program. The negative comments relating to the students' inability to access more difficult texts reinforces the fact that the reasoning behind EGR needs to be more explicitly described to students. The system in which it was delivered had some problems, but with the updates in recent times to both MoodleReader and MReader, the simplified online version of MoodleReader, the problems outlined by students have been overcome. There were negative comments related to the system, but the number was relatively small, and the overall system functioned well. Students also enjoyed seeing their word counts increase as they completed the quizzes, and this could be seen as a type of motivation to read more.

This particular program was, in many ways, a pilot and there have been changes made to it. In a first iteration, problems often occur, and this program was no exception. It will continue to be improved. The main point that needs to be considered here, however, is how extensive the "extensive reading" should be. Prior to starting, the students in this study had little idea about how much they could read in the EGR environment set up for them. They were given a basic goal to achieve for a passing grade. Many read substantially more than their own initial targets. Having done so, the amount they spent reading other texts, lecture notes, and study materials was not adversely affected, and there was no mention that the amount they read was impinging greatly on their other studies. If they had such feelings, they had an opportunity to make them known but did not, which would suggest the reading amount was not too great a burden. Of the 233 students to take both surveys, 123 read considerably more than their initial goal, 60 achieved their initial goal or a little more and 50 achieved less than their goal. Of these last 50, 13 had aimed for more than 150,000 words but achieved more than 120,000. Twenty others missed their word goals possibly because they did not read anything other than very easy books – these 20 all read more than 25 books (five of them more than 40 books), but all of these books were very low level and thus had relatively low word counts. Why these particular students did not try to read more challenging books is another area that could be further investigated. The remaining 17 were either overly optimistic, or satisfied just to achieve a passing grade, as they all had aimed for over 120,000 but achieved only the passing 30,000 word count. More information from them would be required to know the exact reason.

These results suggest that, overall, EGR did not have a major impact on students' reading habits,

as can be seen by the relatively small effect sizes, except in regard to students' reading of other English material. As mentioned, if this means they are reading more appropriate English material in the form of graded readers, this is a positive outcome. The minimum of 30,000 words can therefore be considered certainly far too low for English majors and also too low for non-English majors. The 31 students who read 150,000 words or more over the 15-week course did so without complaint. The average number of words actually read by all students was almost 85,000. Perhaps this number might be a good starting point for further research into the minimum word requirements for non-English majors in a 15-week course. There has been some research (Nishizawa, Yoshioka & Fukuda, 2010) showing that a minimum of 300,000 words over a 3 year period is required to see clear advancements in TOEIC scores. Other researchers such as Beglar and Hunt (2014) and Huffman (2014) have had their non-English major students read 200,000 words annually and 80,000 words over 15 weeks respectively. These researchers have shown their students benefited from so doing. Asking non-English major students to read 85,000 words, as a minimum over a 15-week semester, should ensure improvements in English ability without too great a burden on the students. It should also lead to students reading in excess of 300,000 words over a two-year period – a number that Nishizawa, Yoshioka & Fukuda stated would be required.

Limitations

This study is not definitive by any means. There are a number of limitations. Some of these, with hindsight, may have been overcome with a better design. The questions in the survey only covered single constructs, and as such they lack somewhat in reliability. A more extensive survey design would improve this. As with other self-reported surveys, reliability is similarly reduced. Daily student logs of their reading habits would perhaps overcome this shortcoming. Though there were some 600 students in the original class, only 233 completed both surveys. There are a number of reasons for this including one teacher not having time to carry out the first survey in the class, and a large number of students having already passed their desired word count by the time the second questionnaire was posted, and hence, had left the classroom when it came time to administer the second questionnaire. It is for these reasons that the response rate was lower. A more complete survey of all students would, of course, lead to better results. Though these limitations require the reader to interpret the results with caution, the results do suggest that engineering students' EGR, over a 15-week semester, could be in the vicinity of 85,000 words without adverse effects on the academic reading required in other subjects.

Conclusion

EFL teachers of non-English major students want to give their charges every possible advantage but also understand that their students' majors are usually more important to the students than the English they are learning. Due to this, they may not know how much they should ask of their students in regard to reading volume. "Gut feeling" is often used in such situations, but more research is required to discover exactly how much is enough to ensure improvements in English without detrimental effects on the reading time for other studies of non-English major students. This paper has proposed a baseline for this research to begin.

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References

- Bamford, J., & Day, R. (Eds.). (2004). *Extensive reading activities for teaching language*. Cambridge: Cambridge University Press.
- Beglar, D., & Hunt, A. (2014). Pleasure reading and reading rate gains. *Reading in a Foreign Language, 26*, 29–48.
- Brantmeier, C. (2005). Anxiety about L2 reading or L2 reading tasks? A study with advanced language learners. *The Reading Matrix, 5*, 67–80.
- Burns, R. B. (2000). *Introduction to research methods* (4th ed.). London: SAGE Publications.
- Carver, R. P. (1982). Optimal rate of reading prose. *Reading Research Quarterly, 18*, 56–88.
- Cho, K., & Krashen, S. D. (1994). Acquisition of vocabulary from the Sweet Valley Kids series: Adult ESL acquisition. *Journal of Reading, 37*, 662–667.
- Cohen, J. (1992). A power primer. In R. B. Burns (Ed.), *Introduction to research methods* (4th ed., pp. 155–159). London: SAGE Publications.
- Day, R. R. (2015). Extending extensive reading. *Reading in a Foreign Language, 27*, 294–301.
- Day, R. R., & Bamford, J. (1998). *Extensive reading in the second language classroom*. Cambridge: Cambridge University Press.
- Eguchi, M., & Eguchi, K. (2006). The limited effect of PBL on EFL learners: A case study of English magazine projects. *Asian EFL Journal, 8*, 207–225.
- Huffman, J. (2014). Reading rate gains during a one-semester extensive reading course. *Reading in a Foreign Language, 26*, 17–33.
- Iwahori, Y. (2008). Developing reading fluency: A study of extensive reading in EFL. *Reading in a Foreign Language, 20*, 70–91.
- Laufer, B. (2003). Vocabulary acquisition in a second language: Do learners really acquire most vocabulary by reading? Some empirical evidence. *Canadian Modern Language Review, 59*, 567–587.
- Montgomery, S. L. (2013). *Does science need a global language?* Chicago: University of Chicago Press.
- Murphy, R. (2010). Students' progress and attitudes in an extensive reading class, In R. Reinelt (Ed.), *The new decade and (2nd) FL teaching: The initial phase* (pp. 88–99). Matsuyama, Japan: Rudolf Reinelt Research Laboratory EU.
- Nation, I. S. P., & Wang, K. (1999). Graded readers and vocabulary. *Reading in a Foreign Language, 12*, 355–380.
- Nation, I. S. P. (1997). The language learning benefits of extensive reading. *The Language Teacher Online, 21*(5), 13–16.
- Nishizawa, H., Yoshioka, T., & Fukada, M. (2010). The impact of a 4-year extensive reading program. In A. M. Stoke (Ed.), *JALT 2009 Conference Proceedings* (pp. 632–640).

Tokyo: JALT.

Pan, G., Zang, Y., & Wu, D. (2010). A survey of English learning motivation of students in Qingdao Agricultural University. *Journal of Language Teaching and Research*, 1, 151–156.

Ponniah, J. (2011). Incidental acquisition of vocabulary by reading. *The Reading Matrix*, 11, 135–139.

Poulshock, P. (2010). Extensive graded reading in the liberal arts and sciences. *Reading in a Foreign Language*, 22, 304–322.

Shafi, S. M., & Loan, F. A. (2010). Reading habits among college students of Kashmir across genders. *Trends in Information Management*, 6(2), 92–103.

Takase, A. (2007). Japanese high school students’ motivation for extensive L2 reading. *Reading in a Foreign Language*, 19, 1–18.

Takase, A. (2012). The impact of extensive reading on reluctant Japanese EFL learners. *The European Journal of Applied Linguistics and TEFL*, 1, 97–113.

Waring, R., & Nation, I. S. P. (2004). Second language reading and incidental vocabulary learning. *Angles on the English Speaking World*, 4, 97–110.

Appendix A

Survey 1

1 My reading habits are:

1. I read these more than one hour a day 2. I usually read these for less than one hour a day 3. I read these 2 to 4 times a week for less than an hour. 4. I read these once a week. 5. Unless told to read these by my teacher, I don’t read these

	1	2	3	4	5
Comics					
Novels					
Newspapers					
Homepages					
English books					
Texts / study notes					

2 Choose which applies to you regarding the following statements:

1. I absolutely think so 2. I basically think so 3. I don’t really think so 4. I absolutely don’t think so

	1	2	3	4
I like English.				
I don’t think I will need English in the future.				
To improve at English, I should read a lot of English books.				

I don't want to read English that is below my English level.				
As my major is engineering, I want to read English related to engineering.				

3 My goal for this class is: (In the post questionnaire this was reworded to "I read about ...". Students could clearly see how many words they had read)

1. 30,000 words
2. 50,000 words
3. 90,000 words
4. 120,000 words
5. 150,000 words
6. More than 150,000 words

4 At the moment, I think the system is easy to use.

1. Yes 2.No

5 If you have a comment or a request regarding the extensive English reading program, please tell us.

Appendix B

The following questions were asked only in the second questionnaire.

Choose which applies to you regarding the following statements:

1. I absolutely think so
2. I basically think so
3. I don't really think so
4. I absolutely don't think so

	1	2	3	4
I think my overall understanding of English improved due to the extensive reading program.				
I came to dislike English more because of this extensive reading program.				
If I have to read English books for class, there should be quizzes on the books read.				
The extensive reading program was beneficial to my study.				
After finishing this class, I will continue extensive reading.				
I felt very nervous when I came across new words in the extensive reading.				
Due to this class I became more confident with English.				
I enjoyed seeing my word count increase.				
I often came across words I didn't understand during extensive reading.				

Appendix C

MoodleReader quiz question examples for the Cengage Foundations' level one book "Sarah's Surprise"

Multiple choice question type.

Sarah calls the police because _____.

Select one:

- a. the man and Mrs. Hayes are married
- b. she likes the police
- c. the man takes food and does not give any money
- d. Ji-Sung is washing dishes

Who said question type.

Who said this?

I'm going out now.

(Choices from a drop down menu) A police officer, Sarah, Ji-Sung, The man, Mrs. Hayes

True/False question type.

Mrs. Hayes's name is Sarah.

Select one:

True False

Ordering question type.

Drag the following items into the correct order.

- Mrs. Hayes goes out of the cafe.
- Sarah calls the police.
- Sarah shows the man to Mrs. Hayes and the police officer.
- A man comes into the cafe and asks where Janet is.
- Mrs. Hayes introduces Sarah to Ji-Sung.
- Sarah starts to work at The Lagoon.

About the Author

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