Online Extensive Reading in EAP Courses

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Abstract

Extensive reading (ER) has been shown to be an effective approach in helping second language (L2) students learn to read the target language. Of particular interest is how L2 learners in English for Academic Purposes (EAP) courses that included ER would react to ER since ER involves L2 learners reading easy, interesting books that they select themselves. We examined the reactions of 57 EAP university students to ER. The study was conducted longitudinally for two semesters in Fall 2017 and Spring 2018, where two groups of learners read online books for ten and twelve weeks respectively. We used the Xreading Library, an online subscription-based graded-reader library that allows students unlimited access to more than 1000 books on their computers, tablets or mobile devices. We gathered both quantitative and qualitative data to determine the extent to which online ER affected the learners' attitudes toward reading in English, their academic reading, and English proficiency in general and their instructor' reactions to Xreading. The study revealed that L2 learners' reading attitudes were significantly improved after reading graded readers online. The results also suggested that, in general, the learners felt that their reading rates, vocabulary, grammar, comprehension, writing and speaking were all improved through online ER. Though learners perceived the effects of online ER on their academic reading differently, the instructors held positive attitudes toward online ER.

Keywords: extensive reading, online ER, EAP setting, reading attitude, academic reading, English proficiency

Extensive reading (ER) as a pedagogic approach to second language (L2) reading has been widely implemented in a variety of foreign and L2 contexts and has been shown to be an effective approach to helping L2 learners learn to read (e.g., Jeon & Day, 2016; Krashen, 2007; Krulatz & Duggan, 2018; Nakanishi, 2015; Wang, 2010). However, challenges do exist while implementing ER. One of the main challenges is the difficulty of monitoring students' reading (e.g., Chang & Renandya, 2017). Second, with more and more international students taking academic courses in English, reading ability has been viewed as one of the most important language skills for them (e.g., Hartshorn et al., 2017). However, some students held negative views to reading because of the difficulty in reading in a foreign language, a lack of interest, and a lack of confidence, among other reasons (e.g., Mikami, 2017). Due to these

negative beliefs, this study investigated whether reading easy and self-selected books online could help improve L2 learners' reading attitudes and academic reading ability. Specifically, this study focused on the impact of online ER on learners' attitudes in an English for Academic Purposes (EAP) program and their instructors' experiences in managing the online ER program. Of particular interest was the use of online graded readers instead of the more traditional print or hard copy graded readers.

Even though the effects of ER have been widely researched in a variety of L2 programs, relatively few studies have been conducted in EAP settings (e.g., Macalister, 2008; Ro, 2016; Park, 2016). As Macalister (2008, p. 248) stated, ER appears to be "absent" from EAP settings. The small amount of research that has been conducted in EAP settings indicated that there are positive effects of ER on L2 learners' reading motivation (e.g., Macalister, 2008; Ro, 2016), writing ability (e.g., Park, 2016), and perceptions in EAP settings (e.g., Ro, 2016).

Extensive reading

Extensive reading has been described by Day and Bamford (1998) as an approach to reading where students read as much as possible and select what they want to read. The reading materials are with low level of difficulty, and the purpose of reading is for general understanding and pleasure. To guide language teachers, Day and Bamford (2002) proposed ten principles of ER (pp. 137–141):

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

The theoretical framework supporting ER included the Input Hypothesis (Krashen, 1989) and Verbal Efficiency Model (e.g., Perfetti, 2007). Krashen (1989) stated that "Input Hypothesis assumes that we acquire languages by understanding messages" (p. 440). More precisely, he believed that comprehensible input made a significant contribution to language acquisition. Extensive reading materials provide comprehensible and interesting input to language learners. Comprehensible input promotes different aspects of language acquisition, including vocabulary and spelling (Krashen, 1989). The Verbal Efficiency Model (2007) assumes that automatic and efficient lower-level word-recognition skills are the keys to successful L2 reading. Research has shown that ER helped with the development of sight vocabulary and general vocabulary (e.g., Day & Bamford, 1998). Automatic and swift word recognition would enable cognitive recourses to be allocated to higher-level syntactic processing and comprehension of passages (e.g., Day & Bamford, 1998; Grabe, 2009; Perfetti, 2007). ER research has consistently shown that reading extensively increases reading rates (e.g., Bell, 2001; Beglar & Hunt, 2014; Beglar et al., 2012; Huffman, 2014; Matsui & Noro, 2010; Taguchi et al., 2004), enhances reading motivation and attitude (e.g., de Burgh-Hirabe & Feryok, 2013; Judge, 2011; Komiyama, 2013; Mori, 2002; Nishino, 2007; Takase, 2007; Ro,

2013, 2016), and improves general language proficiency (e.g., Jeon & Day, 2016; Nakanishi, 2015; Robb & Kano, 2013; Sakurai, 2017 Yamashita, 2008).

Online extensive reading

Although both printed and online materials are used in ER programs, the majority of the programs used printed materials (e.g., 39 out of 49 in Jeon & Day, 2016). One reason why ER programs do not use online texts widely might be that, until recently, online materials were mainly authentic materials, that is, materials written for first language (L1) readers. According to Day and Bamford (1998, 2002), in order for students to enjoy reading, the reading material needs to be easy. By "easy", they meant that the reading materials had to be within the learners' comfort zone (Day & Bamford, 2002). For beginning-level readers, more than one or two unknown words per page might make the material too difficult to read. For intermediate readers, a rule of thumb is no more than five unknown words per page (Day & Bamford, 2002). Lastly, unlike graded readers, L1 online reading materials often do not provide readability level information. Without readability level information, students might have difficulty choosing the appropriate reading materials.

A few studies that used online materials (e.g., Xreading Library, Cote & Milliner, 2015) or both online and printed materials (e.g., Cheetham et al., 2016) have shown positive effects of ER on learners' language proficiency and motivation. Actually, Jeon and Day (2016)'s meta-analysis showed that ER studies that used web texts had a larger effect size ($d = .89$) compared to studies that used printed materials ($d = .47$), justifying the use of more online materials in ER programs.

Extensive reading and reading attitude

Attitude is a complex construct because many factors can affect whether a learner holds a positive or negative attitude regarding L2 reading. It is important for language teachers to identify and understand those sources. According to Day and Bamford (1998), the key feature of attitude is an evaluation of a particular entity. Alexander and Filler (1976) defined reading attitude as "a system of feelings related to reading which causes the learner to approach or avoid a reading situation" (p .1). A number of factors might affect a learner's reading attitude. Day and Bamford (1998) identified four contributing factors for L2 learners: L1 reading attitude; previous experience with learning to read other second languages; attitudes toward the L2, culture, and people; and the L2 classroom environment (e.g., teacher, classmates, approach to and support for L2 reading, ongoing experience in L2 reading).

ER has been shown to improve L2 learners' reading attitudes (e.g., Lee et al., 2015; Ro & Chen, 2014; Yamashita, 2013). Noticeably missing is research on the effects of online ER on learners' reading attitudes in EAP programs. Furthermore, it is unclear about students' perceptions of whether reading self-selected easy books could improve their academic reading and different aspects of their language abilities. Since students in our study only read texts from an online graded reader library, we were also interested in knowing their perceptions of reading graded readers online. This study was designed to fill these gaps in the research by addressing the following research questions:

1. To what extent did the online ER program affect the learners' attitudes toward reading in English?
2. What did the learners think of the impact of reading self-selected easy books on their academic reading?
3. Which aspects of the online ER library did the learners find valuable?
4. What aspects of the learners' abilities in English did learners perceive were improved?
5. What were the instructors' reactions to the online ER program?

Methodology

Curriculum

The EAP courses were offered to provide academic English instruction for matriculated students, mainly international students at an American university. The EAP courses offered covered three academic domains: listening and speaking, reading, and writing. In each domain, courses were offered in two levels, intermediate and advanced. Students who scored less than 100 on the TOEFL IBT test were required to take a placement test. The mean for the TOEFL IBT test for the Fall 2017 test-takers was 83.61 (SD = 9.37) (Brown et al., 2018). The placement test was designed and validated by the English Language Institute housed in the Department of Second Language Studies of the university (Brown et al., 2018).

In order to be placed into the EAP reading courses, students needed to take two tests: a gap-filling test and a reading comprehension test. According to the test data of 2017, the participants had a mean of 29.42 (out of 50), SD = 8.33) on the reading comprehension test, and a mean of 19.70 (out of 25, SD = 4.54) on the gap-filling test (Brown et al., 2018). Since the gap-filling test and reading comprehension test had different levels of difficulty, a standard scoring system was created. Please visit the department's website for more detailed information on the placement test (https://www.hawaii.edu/eli/placement-test/about-elipt/).

The primary goal of the intermediate EAP reading course was to increase reading fluency. The goal of the advanced EAP reading course was to help students deal with the high demands of academic reading by helping them to become efficient and autonomous readers.

Both the intermediate and advanced EAP reading courses met for 75 minutes twice a week for 16 weeks. Online ER was required and implemented consistently in both advanced and intermediate levels. The main justification for implementing ER is that ER has been shown to improve reading rates (e.g., Beglar & Hunt, 2014; Beglar et al., 2012), reading comprehension (e.g., Jeon & Day, 2016), and other aspects of language abilities.

The number of words the students were required to read weekly was different in the two instruction levels. Students in the intermediate class were required to read 10,000 words per week. The requirement for the advanced class was higher, at 13,000 words (for Fall 2017 semester) and 12,000 (for Spring 2018 semester) per week. Students were asked to select books online, read the books, and take the online quizzes with 60% accuracy. Both the reading and the quiz were required. Ten percent of the course grade was assigned to ER in both intermediate and advanced classes.

Even though the semester was 16 weeks long, due to the time needed for the online library subscription and the pre-reading attitude survey collection, students in Fall 2017 semester were required to read for ten weeks, and students in Spring 2018 were required to read for 12 weeks.

Participants

The participants were 57 undergraduate and graduate students enrolled in intermediate and advanced EAP academic reading courses offered by an English language institute at an American public university and their three instructors. Table 1 presents the participants' descriptive statistics.

Table 1

Descriptive Statistics of the Participants

Variable	Category	Frequency	Percentage
Level Fall 2017	Intermediate	13	22.80%
	Advanced	28	49.12%
Level Spring 2018	Intermediate	3	5.30%
	Advanced	13	22.80%
Gender	Male	19	33.30%
	Female	38	66.70%
Nationality	Korea	4	7.00%
	Japan	20	35.10%
	China	18	31.60%
	Iran	2	3.50%
	Philippines	5	5.30%
	Vietnam	3	5.30%
	Thailand	1	1.80%
	Indonesia	2	3.50%
	Federated State of Micronesia	1	1.80%
	Ukraine	1	1.80%

Instruments

Quantitative data were collected using a pre- and post-reading attitude questionnaire with 15 items ranked on a four-point Likert scale. The questionnaire was designed by one of the authors of this study. The items asked about learners' attitudes toward reading in English, including statements on whether they thought reading in English was rewarding, whether they felt confident in reading, and whether they enjoyed reading in English (see Appendix A for the reading attitude survey). The questionnaire was reliable with the Cronbach's values of .883 for the pre-reading and .857 for the post-reading attitude survey.
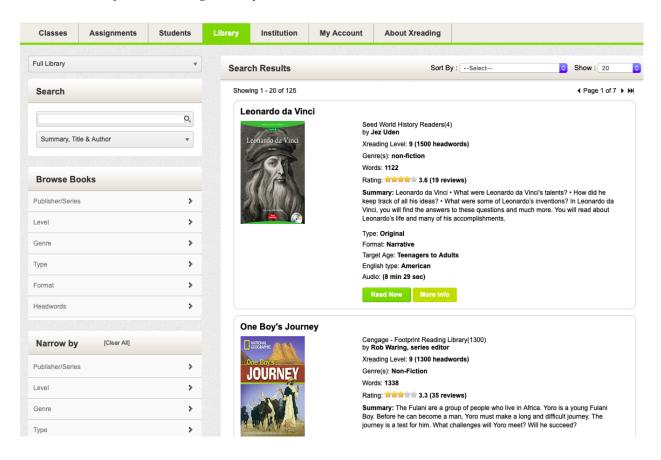
In addition, qualitative data were gathered from students' and teachers' semi-structured interviews at the end of each semester (see Appendix B for the interview questions for students and instructors). Most of the interviews were conducted in English, and only one

was conducted in Chinese upon the participant's request. We collected both quantitative and qualitative data because research has shown the strengths of using both types of data in increasing the credibility and trustworthy of academic inquiry (e.g., Brown, 2014; Greene, 2007).

Materials

We used the same web-based ER program that Cote and Milliner (2015) did, the Xreading Library (xreading.com). The Xreading Library provides around 1,000 graded readers of various genres. It allows students to read from computers, smartphones, or any other electronic devices. They can choose books according to their interests, the books' readability level information, or other readers' book reviews. Students can also listen while reading if the book has audio. After finishing reading a book, students take an online quiz. Each quiz has five multiple-choice reading comprehension questions. The Xreading Library can keep a record of students' reading rates, the books they checked out, the percentage of each book read, and the number of words read. Figure 1 is a screenshot of the Xreading Library.

Figure 1

A Screenshot of the Xreading Library

Data collection and analysis

The starting times of the online ER program were different in the two semesters. The main reason was that Fall 2017 was the first semester we started the program. We first subscribed to the online reading library, familiarized ourselves with the system, and then trained the instructors. In both semesters, we also gave students one week for trial reading so that they would get a chance to experience how to check out a book and how to complete the online quiz. At the end of the trial week, we administered the pre-reading attitude survey.

In Week 4 of the Fall 2017 semester, the pre-reading attitude survey was administered to the intermediate and advanced academic reading classes. Then students read ER books online and took online quizzes for ten weeks. The post-reading attitude survey was administered in Week 15. The student and instructor interviews were also conducted in Week 15. Two more proficient readers and two less proficient readers from one intermediate class and both advanced classes were recommended by their teachers to be interviewed. Altogether, 12 students and three instructors were interviewed.

In the Spring 2018 semester, the pre-reading attitude survey was administered in Week 2 and the post-reading attitude survey was administered in Week 15. As in the Fall 2017 semester, besides attending classes and working on class projects, the students read graded readers online and took online quizzes for 12 weeks. The student and instructor interviews were conducted in Week 15. Two more proficient readers and two less proficient readers from each advanced class were recommended by their teachers to be interviewed. Since the intermediate class only had two students, we interviewed both of them. Three instructors were also interviewed. Altogether, we interviewed 22 students and six instructors.

To examine the students' reading attitudes, the pre- and post-reading attitude questionnaire items were analyzed with descriptive statistics and a mixed-effect ANOVA, where Level (intermediate vs. advanced) was a between-subject factor and Time (Pre-Post) a within-subject variable. The qualitative data were transcribed and analyzed using NVIVO 11 for Windows. The themes were first coded by one of the authors and then confirmed by the second. Any disagreement was discussed by the two authors and 100% agreement was reached after the discussion.

Results

The reading data of both the intermediate and advanced students in Fall 2017 and Spring 2018 were analyzed. Table 2 shows the average number of books the students read, the average number of words read, and their average reading time. On average, students read 18 books and 91,077 words in one semester. Their average reading time was 14 hours.

Table 2

The Average Number of Books Read, the Average Number of Words Read, and the Average Reading Time

		Number of students	Average number of books read	Average number of words read	Average reading time
Fall 2017	Intermediate	18	14	74,000	11 hours
	Advanced	33	13	88,635	13 hours
Spring 2018	Intermediate	3	25	103,104	20 hours
	Advanced	33	19	98,570	11.5 hours
	Average	18	18	91,077	14 hours

Note. The number of students in this table was all the students enrolled in the academic reading courses. However, some did not complete the pre-reading attitude survey, so they were excluded from this study.

Table 3 displays the mean scores of each of the 15 items in the reading attitude survey (minimum 1, maximum 4) for both the pre- and the post-reading attitude questionnaires. Statements 7, 9, 12, 13, and 14 were reversely coded. For example, for statement 12 (I do not enjoy reading English), the means are 2.86 for the pre-test and 2.93 for the post-test (with *SDs* of .639 and .704). Without the reverse scoring, they would be 1.14 for the pre-test and 1.07 for the post-test, which indicated that the participants had a more negative view on reading in English before the ER than after the ER. We can see from Table 3 that students' reading attitudes improved as reflected in the pre- to post-reading attitude questionnaire items comparison.

Table 3

Descriptive Data for the Pre- and Post-Reading Attitude Questionnaire

	Mean (Pre)	*SD*	Mean (Post)	*SD*	N
1. I have confidence in reading English books	2.53	.73	2.96	.82	57
2. I find reading in English personally rewarding.	2.82	.69	3.11	.65	57
3. I find reading in English fun.	2.65	.72	2.96	.68	57
4. I find reading in English useful	3.38	.65	3.58	.63	57
5. It is easy for me to read English.	2.29	.80	2.61	.84	57
6. I read English books, comics, newspapers, etc., outside of class.	2.75	.69	2.84	80	57
7. When I read English, I need to look up many words in the dictionary.	2.00	.76	2.11	.73	57
8. When I read English, I am very interested in what I read.	2.77	.74	3.02	.74	57
9. I find reading English boring.	2.75	.69	2.81	.69	57
10. After reading English, I am very interested in what I read.	2.84	.75	2.88	.71	57
11. I would like to read more English.	3.14	.72	3.05	.67	57
12. I do not enjoy reading English.	2.86	.64	2.93	.70	57
13. I am a slow reader when I read English.	1.93	.82	2.23	.89	57
14. When I read English, I don't understand very much.	2.58	.71	2.84	.70	57
15. I think reading books for pleasure in English is important.	3.42	.68	3.56	.71	57

Before conducting the main analysis, we checked the assumptions for conducting a mixed-effect multi-factorial ANOVA. First, we performed the Kolmogorov-Smirnov/Shapiro-Wilk test to examine the normal distribution of the reading attitude scores across the class level (intermediate and advanced) and over the within-group time points (pre- and post-). As the group size of this study is small, we referred to the Shapiro-Wilk outcome. There was no problem with the normal distribution for the levels of the dependent variable ($p > .05$). Next, we checked whether the assumption for homogeneity was met. The Box's M test for homogeneity of variance-covariance matrix result ($p = .284$) was larger than .001. Thus, the homogeneity assumption was also met.

RQ 1. To what extent did the online ER program affect the learners' attitudes toward reading in English?

The Mixed-effect Multi-factorial ANOVA analysis revealed that time was a significant within-group factor, $F(1, 55) = 7.856$, $p = .007$, $\eta2 = .12$, $d = .786$. The results, displayed in Table 4, suggested that the participants had more positive attitudes toward reading in the post-reading attitude questionnaire ($M = 2.85$, $SD = 6.36$) than in the pre-reading attitude questionnaire ($M = 2.67$, $SD = 6.68$). Level was not a significant between-group factor: $F(1, 55) = 2.987$, $p = 0.09$, $\eta2 = .05$, $d = .37$. Although the advanced class students had more positive reading attitudes in both the pre- and post-reading attitude questionnaire compared to
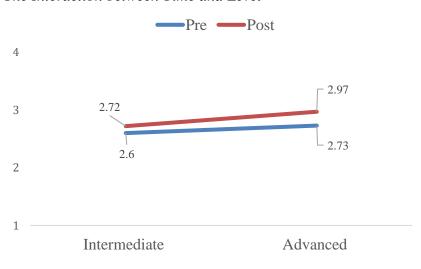
the intermediate class students, the difference was not statistically significant. The interaction between time and level was not significant as well, $F(1, 55) = .769$, $p = 0.384$, $\eta2 = .014$, $d = .138$. Figure 2 shows the interaction between time and level. According to Cohen's (1988) criteria and Plonsky and Oswald's (2014) more conservative criteria, the three effect sizes were small.

Table 4

Descriptive Statistics of Reading Attitudes across Two Levels

LEVEL	Pre-Mean (SD)	Post-Mean (SD)	N
Intermediate	2.60(6.28)	2.72 (5.65)	16.00
Advanced	2.73(6.82)	2.97(6.39)	41.00
Total	2.67(6.68)	2.85(6.36)	57.00

Figure 2

The Interaction between Time and Level

The responses to the first three students' interview questions also answered the first research question. The first three interview questions asked whether the students enjoyed online ER, whether online ER made them more confident in reading, and whether they agreed that reading in English was useful. Table 5 shows that 59%, 77%, and 100% of the students agreed that they enjoyed online ER, that online ER made them more confident in reading, and that reading in English was useful.

Table 5

Students' Perceptions of Enjoyment, Confidence, and Usefulness of Online ER

		Frequency	Percentage
	Yes	13	59%
Enjoyment	Ok	3	14%
	No	6	27%
	Yes	17	77%
Confidence	Maybe	4	18%
	No	1	5%
Usefulness	Yes	22	100%
	No	0	0%

RQ2. What did the learners think of the impact of reading self-selected easy books on academic reading?

The responses to the fourth interview question, "Do you agree that reading self-selected easy books helps improve your academic reading? Why or why not?", answered the second research question. We reported the percentage and cited some participants' responses to this question. Table 6 shows the percentage of each theme.

Table 6

Students' Perception of Whether ER Improved their Academic Reading

	Frequency	Percentage
No	10	50%
Not sure	1	5%
Yes	9	45%

Fifty percent of the participants agreed that ER did not improve their academic reading. The common subthemes arising from the interview data are that the reading materials were not so academic, or students did not select to read academic books.

Excerpt (1)

> I: Do you agree that reading self-selected easy books helped improve your academic reading?
> P1: I don't think so, because I think the books in Xreading is somehow not so academic, I prefer to read more academic books in Xreading.
> I: Uh
> P1: Like some books that related to some majors, like maybe astronomy, mathematics, science like that
> I: So do you want to have more academic books on Xreading?
> P1: Yeah

Excerpt (2)

I: and we also encourage students to read easy books, not difficult books, so do you think that reading those self-selected, easy books improved your academic reading?
P3: so actually, I chose books which is not related to academic books, for example, ghost, horror, so I think, yeah, it was not helpful for me, but if we choose the books which is related to more academic, maybe it is more helpful

In Excerpt (1), P1 did not think that reading self-selected books online improved his academic reading because most of the books in the Xreading Library were not academic books. P3 in Excerpt (2) did not choose academic books; instead, he/she chose horror and ghost genres. Since students have autonomy in deciding what they want to read, it seems that they tend to choose non-academic books. However, not all students tended to choose easy books. Some participants selected difficult books and enjoyed them.

Nine students (45%) reported that reading self-selected easy books online helped improve their academic reading. The common sub-themes arising from the interview data were that ER improved reading skills, including reading rate, reading comprehension, and affective aspects of reading, such as reading attitude and motivation. For example, P15 in Excerpt (3) was unwilling to read initially, but as the participants practiced reading more and understood more, he/she was willing to read academic textbooks.

Excerpt (3)

I: So for Xreading, you choose books by yourself, do you think that reading those self-selected books improved your academic reading?
P15: yeah, I think it helps
I: how?
P15: before I do not read a lot, now I have read books from Xreading, so I become more interested in reading books, and understanding, understanding more (of what) the book is saying, the story is about, it gives me more learning English, I can easily understand some of the books, not like before, when I first start with Xreading, it was hard for me to understand, not like now, that I have been reading, so it shows me more
I: so at the beginning it is hard for you to read, and then now it is easier
P15: yeah
I: Do you think that helps your academic reading, like reading your textbook?
P15: yeah, it helps, I began to like to read more
I: ok, so you want to read your textbook now
P15: yeah
I: so that is how it helps
P15: yeah

Another interesting theme arising from the interview data was that some learners called for more teacher guidance in implementing ER, especially in material selection.

Excerpt (4)

I: good, do you agree that reading self-selected easy books help improve your academic reading?

> P2: uh uh, it did help improve my academic reading, but I won' recommend it to be always self-selected to students
> I: oh
> P2: sometimes you like have to give them a challenge, give them something to read, not something that they want to read
> I: oh, can you give me an example about something that you want them to read
> P2: uh, I would say that they should read the Great Gatsby
> I: the novel
> P2: yeah, that is a good book. I would also recommend that they should read the articles from newspapers, or something like that, you know, so they can have a better in depth of reading

To summarize, almost half of the interviewees believed that online ER benefited academic reading. The large quantity of reading and the weekly practice of reading motivated students to read more and improved their reading skills. On the contrary, the other half of the interviewees said that online ER reading did not benefit their academic reading. The main reasons were that either some of the graded readers are not on academic topics or they selected non-academic books to read.

RQ3. Which aspects of the online ER library did the learners find valuable?

This question was answered by the students' responses to the fifth interview question, "What aspects of Xreading do you find valuable?". Table 7 presents the themes that emerged from the interview data.

Table 7

Aspects of Xreading Reported by Students as Being Valuable

	Frequency	Percentage
Reading books	6	25%
Quizzes	6	25%
Readability level	5	21%
Don't know	2	8%
Accessibility	1	4.2%
Achievement	1	4.2%
Reading habit	1	4.2%
Self-selection	1	4.2%
Vocabulary	1	4.2%

The most frequently mentioned theme is books. Xreading provided readers with over 1000 graded readers. Some interviewees mentioned that they were able to read books they usually do not read, such as *Pride and Prejudice* (P5). One interviewee mentioned how he/she was hooked in the books he/she read online and was able to allocate time to read regularly.

The second worthy aspect of the Xreading website is the online quiz. Interviewees mentioned that the quizzes were a way to check their reading comprehension. Interviewees also mentioned that the quizzes helped them to recall what happened in the stories. One interviewee also commented he/she did not like taking a quiz, but it was helpful.

The readability level refers to the readability level of the online graded readers. One interviewee mentioned that it was valuable that each book had information on levels. Each book's readability level is beneficial since students can just narrow down their book search based on readability levels. One interviewee mentioned that "there is no need to open each book to see whether it is appropriate for you" (P 10). Another interviewee mentioned that "If I want to challenge myself with something more difficult, to learn more, I would choose a book with a higher reading level. If I want to read a lot today, and absorb a lot, I will choose a simpler one." (P15). Thus, the availability of readability level information brings convenience to students' online book selection.

Self-selection was another subtheme that emerged from the interview. Students selected the books they wanted to read, not what teachers want them to read. Achievement was another important aspect of the Xreading Library. Since the Xreading library kept track of the number of words read and the reading rate, students felt a sense of achievement when the number of words read and the reading rate increased. Since the students were required to read online every week, they formed the habit of reading, which was another beneficial aspect of reading online. One interviewee mentioned that "until I really try reading it, so I say, this is good, so I made a habit to read it" and he/she "reads every week" (P16).

To summarize, the books in the online library and the easy access hooked students on reading. Taking online quizzes enabled them to check their reading comprehension and get immediate feedback. The readability level information made it easier to self-select books online. As a result, students read regularly, felt a sense of achievement, and formed a reading habit.

RQ4. What aspects of the learners' L2 language abilities did learners perceive were improved?

This research question was answered by the students' responses to the sixth interview question, "Which aspects of English language abilities have been improved through reading books this semester?" Most students mentioned more than one aspect of their language abilities that were improved through online ER. Table 8 presents the frequency and percentage of each aspect.

Table 8

Aspects of Self-Reported Language Abilities Improved through Online ER

	Frequency	Percentage
Reading rate	14	35%
Vocabulary	10	25%
Grammar	9	22.5%
Comprehension	3	7.5%
Writing	2	5%
Speaking	2	5%

Reading rate was the most frequently mentioned aspect of language abilities that was improved through online ER (35%). Xreading library provides the participants the information on the reading rates of the books they read. Because students can see their

reading rates, they may have a better sense of their reading levels as well. For example, Table 9 shows the reading data of one randomly selected student. One can see that when this student read a book at level 13 (Mrs. Dalloway ELI), the reading rate was 62.7 word per minute (wpm), whereas when the student read an easier book at level 6 (William Shakespeare), the reading rate was 100.9 wpm. The accurate record of the reading rates may have also promoted students' reading attitudes.

Table 9

The Reading Record of One Student

Books	Xreading level	Words Read	Reading Rate (Words per Min)
Mrs. Dalloway ELI	13	21573	62.7
How's the Weather	12	1233	45.8
William Shakespeare	6	9656	100.9
The Card	7	11322	81.8
The Green Room	9	10459	100.2
Treasure Island	8	10040	135.2
Princess Diana	5	10192	139
Danger in the Sun	10	10100	62.2
Red Water	10	10263	79
The Enchanted April	10	11738	111.3
Chemical Secret	7	10319	138.4

Ten students reported that they learned vocabulary through online reading (25%). Nine students also mentioned that they noticed how words were placed to form sentences and this helped their grammar knowledge (22.5%). Because online reading helped with vocabulary and grammar, their writing and speaking abilities were also improved. Students mentioned that they used the vocabulary from reading in oral communication and writing as well.

RQ5. What were the instructors' reactions to the online ER program?

This research question was answered by the responses of the instructors to three interview questions. The three interview questions were whether the instructors thought online ER was valuable, which aspects of students' learning were improved, and what the challenges and difficulties were in implementing online ER.

For the first interview question, all six instructors from the two semesters agreed that online ER was valuable.

Excerpt (8)

> I: Do you think Xreading is valuable for your students, why or why not?
> Instructor 2 (T2): It is.
> Interviewer: It is valuable. Why?
> T2: Uh, I got some feedbacks from students, which are positive, so basically, they say that Xreading helps them develop the habit of reading.

The instructors also mentioned that they formally or informally collected students' feedback to the online ER program. Some instructors asked their students to write reflection journals, conducted student-instructor conferences, collected mid-semester surveys, or simply observed their students' reading and talked to them.

As for the challenges and difficulties encountered in implementing the Xreading Library, the main challenge mentioned was the technical issues in managing the website (Table 10). The lack of graded readers with adult content was another challenge mentioned by the instructors (Excerpt 9).

Table 10

Challenges and Difficulties in Implementing Online ER

	Frequency	Percentage
Xreading website	4	57%
Variety of books	2	29%
Clear goals	1	14%

Excerpt (9)

> T2: I think one of the problems that the students say, not for me, but for them, is some of them said there weren't enough books at their level.
> I: At their level, really?
> T2: Well, they are at their level, but they are designed for children, so if you look through it, there is a lot of children's book at higher level, I mean that was a small complaint.
> I: Yeah, that is interesting.
> T2: But I do wonder in the future if they have enough books for students like in 72 [intermediate academic reading class] or 82 [advanced academic reading class].

We asked both the instructors and the students about the aspects of language ability that were improved through online ER. A comparison of Table 8 and Table 11 indicated that both the teachers and students agreed that students' reading rates, vocabulary, and comprehension were improved. Enjoyment and continued reading were two aspects that were improved from the instructors' perspective but not the students'.

Table 11

Aspects of Students' Learning Improved from Teachers' Perspective

	Frequency	Percentage
Enjoyment and continued reading	2	29%
Reading rate	2	29%
Vocabulary	1	14%
Comprehension	1	14%
Practice	1	14%

Discussion

The results of this study provided empirical evidence for the widely accepted view that ER plays a positive role in reading attitudes. More importantly, through a longitudinal investigation, the current findings extended the positive effects of ER to online reading and EAP settings.

The effects of online extensive reading on reading attitudes in EAP setting

The first outcome of this study was that online ER had a significant positive effect on students' reading attitudes. Students' reading attitudes significantly improved after reading graded readers online for ten to 12 weeks. The quantitative survey data, complemented by qualitative interview data, revealed the learners held positive views of online ER. This finding was in agreement with previous studies on the effects of ER on EFL learners' reading attitudes (e.g., Ro, 2013; Ro & Chen, 2014; Yamashita, 2013) but extended it to learners in an EAP setting.

There are several possible reasons why online ER enhanced students' reading attitudes. First, a positive attitude might be due to the fact that students read a great deal. This is also one of the key ER principles (Day & Bamford, 1998). Second, the accurate record of the learners' reading rates and the number of words read might lead to positive attitudes. In traditional ER classrooms, teachers might ask students to keep track of their reading using reading logs. However, this requires extra effort. It is also common that some students might forget to bring their reading logs to class or forget to note down the required information. Thus, there might be a benefit in using an online reading library like the Xreading Library which records students' reading rates and the number of words read. Third, reading a lot and completing the reading assignment every week might have helped the readers to form a reading habit. A previous study (Boakye, 2017) also revealed that an ER program significantly improved students' reading habits. More importantly, after the reading habit is formed, it tends to stay over time, such as six months (e.g., Rodrigo et al., 2014). Nevertheless, it is not clear whether the participants in this study would keep reading after their academic classes.

The benefits of online ER in EAP setting

The second outcome of the current findings pertains to the benefits of online ER on different aspects of language proficiency. Firstly, the students' reading rates had increased because they read a large number of words each week and read for the whole semester. ER research has shown the positive effect of ER on reading rate (e.g., Beglar & Hunt, 2014; Beglar et al., 2012; Huffman, 2014). Reading rate is an integral part of reading fluency, and reading fluency plays a significant role in reading comprehension. The reading rate improvement gained through reading graded readers might transfer to reading academic materials such as textbooks and journal articles. Secondly, this study was also in agreement with previous research findings that ER benefited the incidental learning of vocabulary (e.g., Laufer & Rozovski-Roitblat, 2011; Pigada & Schmitt, 2006). The improvements in speaking and writing may have been related to the gains in vocabulary knowledge. Thirdly, this study also suggested that grammatical knowledge was learned through online ER (e.g., Lee et al., 2015). This benefit was directly related to academic writing. The knowledge of how words are placed in a sentence might help the production of new sentences in writing, especially if the learners read a large number of ER books in their L2 (e.g., Sakurai, 2017; Park, 2016).

The valuable aspects of online extensive reading

The third outcome of this study is that it identified valuable features of online reading. The online books, the online quizzes, and the readability level information inserted in the online library were the three most valuable aspects of the Xreading Library. We would like to discuss two key features here: accessibility and online quizzes.

Accessibility not only refers to the availability of books on a variety of topics, but also the easy access of reading materials at any time and on any device. This study demonstrated the importance of both aspects of accessibility. On the one hand, students would like to read more books on academic topics. On the other hand, the online ER library made accessing reading materials at any time and on any device possible, which is a unique feature of online ER compared to traditional ER.

The online quizzes were another critical aspect of the Xreading Library. There has been discussion of whether students need to be tested in an ER program and how. Some researchers (e.g., Stoeckel et al., 2012) reported that some ER experts implied that testing could negatively affect students' reading attitudes. However, other researchers (e.g., Reed & Goldberg, 2008; Stoeckel et al., 2012) supported the use of ER tests, including comprehension questions. The answer to this question from our study is that the online quizzes were valuable. If administered online, quizzes can be used to check students' reading (e.g., Moodle Reader quizzes used by Robb & Kano, 2013). Thus, this study provided extra evidence to support the use of quizzes as a way of determining reading comprehension.

The instructors' reaction to online extensive reading

All the instructors in this study held positive attitudes toward online ER. This positive attitude may be partially due to their theoretical knowledge about the benefits of ER. All of them were M.A. or Ph.D. students who had taken courses on L2 reading theories and have taught L2 reading. Another reason why they were favorable toward online ER might be due to their interaction with students. When some of their students shared their reading progress with the instructors, they were more likely to encourage other students to continue ER. Thus, the instructors' attitudes toward ER could also be affected by their students. It is important to encourage language teachers to collect students' views on ER on a regular basis through interviews, reflections, or diaries. It would also be significant if the instructors could talk about the benefits and importance of ER with their students.

The pedagogic implications of ER in academic contexts

The pedagogic implications of the present study, complementing previous research, is that ER could be implemented in EAP settings. Some guidelines include the following. First, there needs to be teacher guidance in the implementation of the program and a balance between teacher guidance and reader autonomy. Although one of the guiding principles of ER is students can choose whatever they would like to read (e.g., Day & Bamford, 2002), this does not mean "sudden and total transfer of control over the learning process, tasks, pace, and materials to learners" (Jose, 2018, p.59). Some students in this study tended to choose "too" easy materials, and others called for more teacher guidance. This is especially important in an EAP setting because one of the goals of implementing ER is to enhance students' academic reading abilities. Second, some students reported that they would have liked more materials related to their majors or academic topics. Interesting and easy ER books on academic topics

might be very beneficial to engage EAP students. Furthermore, although the books on Xreading Library are language learner literature, which is different from children's books (see Day & Bamford, 1998), it seems that both the instructors and the students had an impression that easy books are "for children" (e.g., Excerpt 9). Thus, an orientation before the implementation of online ER seems necessary where the definition of ER, the benefits of ER, and the types of materials to be read could be introduced by instructors.

Conclusion

Two broad conclusions could be drawn from the findings of the current study. The first is that online ER significantly affected both intermediate and advanced students' reading attitudes in EAP courses. Second, online ER could be implemented as a required element in EAP courses due to its benefits on different aspects of language proficiency and the unique features of online ER libraries.

While the findings of this study offer insights into the benefits of online ER in EAP settings, they also bring light to several methodological limitations and directions for future research. One major drawback of our study is the lack of a post-program follow-up. It would be desirable to see if EAP students who engaged in ER would continue to do so after completing the EAP courses. Another limitation of the study is that there is no measurement of students' academic achievement or different aspects of language abilities. The data we collected were students' perceptions of whether online ER enhanced their academic reading and language abilities. Future research could include pre- and post-tests to measure learners' academic reading abilities, such as the abilities to summarize the main ideas of a research article, to skim and scan, and so on, and different aspects of their language abilities (e.g., Yamashita, 2008). Another direction for future research would be to investigate the effects of students' background variables on their reading attitudes in an online ER program. For example, students of different majors might have diverse perceptions of online ER and its benefits. Students who pursue undergraduate and graduate degrees might also differ in their views of online ER. Finally, it would be helpful if future research could adopt an experiment-control group research design. This way, a stronger argument for the effects of ER on reading attitude in EAP contexts could be provided.

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Appendices

Appendix A
Reading Attitude Survey

1. Name_____
2. Nationality _____
3. How many years have you studied English? _____ Years

Indicate your agreement or disagreement with each of the statements by using the letter from this scale:

Strongly Agree	Agree	Disagree	Strongly Disagree
A	B	C	D

1. _____I have confidence in reading English books.

2. _____I find reading in English personally rewarding.

3. _____I find reading in English fun.

4. _____I find reading in English useful.

5. _____It is easy for me to read English.

6. _____I read English books, comics, newspaper, etc., outside of class.

7. _____When I read English, I need to look up many words in the dictionary.

8. _____When I read English, I am very interested in what I read.

9. _____I find reading English boring.

10. _____After reading English, I am very interested in what I read.

11. _____I would like to read more English.

12. _____I do not enjoy reading English.

13. _____I am a slow reader when I read English.

14. _____When I read English, I don't understand very much.

15. _____ I think reading books for pleasure in English is important.

Appendix B
Interview questions for students

1. Do you enjoy reading on Xreading? Why or why not?

2. Do you agree that Xreading makes you more confident in reading? Why or why not?

3. Do you agree that reading in English is useful? Why or why not?

4. Do you agree that reading self-selected easy books helps improve your academic

   reading? Why or why not?

5. What aspects of Xreading do you find valuable?

6. Which aspects of English language abilities have been improved through reading

   books this semester?

7. What else do you want to share with me about the Xreading project?

Interview questions for instructors

1. Do you think Xreading is valuable? Why or why not?

2. What difficulties have you experienced managing the Xreading program?

3. Which aspects of students' learning have been improved through Xreading?

4. Would you recommend Xreading to other ELI teachers? Why or why not?

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