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The Effect of Extensive Reading on Korean EFL Learners' Reading Ability

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This study investigated the effects of extensive reading (ER) on Korean high school students' English reading ability. This study also explored how the students perceived ER and ER program activities in school settings. Three high schools that have run different ER programs were recruited for this study. One hundred seventy high school students from the three schools participated in this study. This study mainly employed a quantitative research method; that is, research data included pre- and post-English reading comprehension test scores and survey responses. For the data analysis, a paired-samples *t*-test, a one-way ANOVA, and a Kruskal-Wallis test were employed. The findings of this study revealed that ER was effective on improving the students' English reading ability. With respect to school differences, the extensive reading program of E school was statistically significant while the other schools' ER programs were not. In terms of comparing two different extensive reading programs − an extracurricular-based program and a curriculum-based program − the extracurricular-based extensive reading program was more effective than the curriculum- based extensive reading program in the high school setting. In addition, most of the students showed positive attitudes and motivation toward ER; especially the advanced learners showed the most positive attitudes toward ER followed by the intermediates and beginners. The findings are discussed and implications for pedagogy are suggested.

**[extensive reading/reading comprehension ability/
다독읽기/읽기 이해 능력]**

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I. INTRODUCTION

Especially in Korea where English is taught as a foreign language (FL) in school settings, an intensive reading approach that originated from Latin translation instruction has been dominant over decades. EFL teachers still seem to perceive that it is the only safe teaching approach to enhancing EFL learners' English language skills and reading fluency; that eventually helps guarantee better test scores. Especially with respect to English reading instruction, EFL teachers seem to be obsessed with the idea that L2 learners should be challenged to 'learn' through decoding and translating word by word (J. H. Byun, 2011; Haider & Akhter, 2012; K. M. O, E. J. Kim, & J. Yang, 2009). This reasoning has determined how English reading instruction has been dealt with and why intensive reading still prevails in schools. Furthermore, in terms of assessment, the College Scholastic Ability Test (CSAT) has been playing a negative role in EFL reading education. It has nationally been assessing Korean high school students' English ability, focusing on reading skills such as decoding, reasoning, and comprehension. Paradoxically, it may be that such higher thinking skills can be better developed with the help of extensive reading. The reading emphasis in the CSAT might be one of the causes that have led both EFL teachers and students to focus on intensive reading and the emphasis on test-driven reading instruction.

For these reasons, the notion of extensive reading (ER), compared to intensive reading, has been widely proposed as an ideal way for L2 readers to become independent and lifelong readers of the large body of literature (Day & Bamford, 1998; Grabe, 1991, 2002; Grabe & Stoller, 2001; Krashen, 1993, 2004; Palmer, 1964; Simensen, 1987). A number of researchers recently suggested that ER is becoming more popular in L2 reading education. It can be an addition to the three reading ways of skimming, scanning, and intensive reading (Day & Bamford, 1998) and can facilitate L2 learners to become better readers by reading easy, content-rich material for pleasure reading at "i – 1" (Haider & Akhter, 2012; Iwahori, 2008; H. J. Min & H. J. Han, 2011; K. M. O, E. J. Kim, & J. Yang, 2009; Sun, 2003; E. M. Yang, 2010). According to reading research in Korea, it is evident that ER has educational benefits that can help K-12 Korean EFL learners acquire English language and reading skills; furthermore, researchers reported that ER can significantly affect all language skills, including listening and writing skills (Y. S. Lee & K. J. Kim, 2011; I. Shin & B. Ahn, 2006; D. S. Han, 2004). It has positively changed Korean EFL learners' attitudes toward reading and their motivation for reading (H. S. Ahn, B. B. Im, & S. D. Yoon, 2010; J. H. Byun, 2011; K. H. Cho & J. W. Lee, 2010; S. Choi, 2010; B. Kim, 2012; H. Lee & M. Kim, 2007; Y. S. Lee & K. J. Kim, 2011; S. S. Park & W. H. Kang, 2004). For overall effects of ER in Korea, J. Kim (2011) conducted a meta-analysis of extensive reading studies, and found out that ER was effective on vocabulary (Effect Size (ES): 0.73), reading comprehension (ES: 1.06), reading speed (ES: 0.80), listening (ES: 1.94)

and writing (ES: 1.04) skills, respectively. In addition, elementary (ES: 1.33) and adults (ES: 1.8) groups had gained more positive effects than a secondary (ES: 0.55) group regarding age groups. That is, it is likely that secondary students are intrinsically less motivated to read for pleasure. We, therefore, suggest that it is necessary to find ER programs which can be effective for secondary students in their development of English language and reading skills, and positively change their reading habits, attitudes, and motivation toward reading, comparing to the effectiveness of ER programs.

In particular with ER programs, Day and Bamford (1998) proposed four specific ER programs: 1) a separate, stand-alone course, 2) part of an existing reading course, 3) a noncredit addition to an existing course, and 4) an extracurricular activity in school settings. Few previous studies, however, have attempted to examine these ER programs for specific age groups in high school settings.

Thus, this study mainly examines which of the specific ER programs (a separate, stand-alone course, part of an existing reading course, a noncredit addition to an existing course, or an extracurricular activity) that Day and Bamford (1998) suggested is more effective for Korean EFL learners in high school settings. To this end, we chose three high schools that have run different ER programs in school settings, and examined the effectiveness of the ER programs by quantifying the learners' pre-post reading scores. In addition, we explored how Korean EFL learners perceive ER and ER program activities for reading in school settings. The research questions are as follows:

1) Was ER effective on improving the high school EFL learners' reading ability?
2) How do three high school ER programs differ from one another?
3) Which high school ER program was more effective in terms of the EFL learners' reading scores, and what made the difference?
4) How do the EFL learners perceive ER and ER programs?

II. LITERATURE REVIEW

1. The Definition and Principles of Extensive Reading

Palmer is considered the first to use the term, "extensive reading"; and, in his book, it meant "rapidly reading book after book" (Palmer, 1964, cited in Day & Bamford, 1998, p. 5). He also used "intensive reading", meaning to "take a text, study it line by line, referring at every moment to our dictionary and our grammar, comparing, analyzing, translating, and retaining every expression that it shows" (Palmer, 1964, cited in Day & Bamford, 1998, p. 5). According to Krashen (1993; 2004), extensive reading refers to self-interested

or free, voluntary reading for readers who want to find reading materials that are appropriate to their own language proficiency levels and understanding. The emphasis of extensive reading has been on reading for fun and general understanding so that interesting and easy reading materials are the priority in the selection process. Day (2011) explained that "extensive reading in the EFL/ESL context is an approach to teaching reading whose goal is to get students reading in the English language and enjoying it" (p. 10). Compared to extensive reading, he believes that intensive reading is not so much 'reading' as 'studying.' Overall, the purpose of extensive reading is to read large quantities of books for pleasure while intensive reading is to read short, decontextualized texts and analyze them for study. The purpose of extensive reading is, therefore, to make readers read more and enjoy what they read. In addition, Day and Bamford (1998) argued that extensive reading can be part of a second language curriculum, proposing four ways as follows. The *separate, stand -alone course-* program is an independent extensive reading program as other subject courses do. It can be composed of a single 50-minute period once or twice a week with no relation to the part of other courses. Compared to the *part of an existing reading course*, the *noncredit addition to an existing course* program can be used to entirely encourage ER readers to be part of the existing extensive reading with no extra credit addition to their final grades. However, the *extracurricular activity* program is an after-school activity, not based on the existing courses or curriculum. It can be truly 'fun for reading' and encourage readers to enjoy what they are interested in after school.

- A separate, stand-alone course
- Part of an existing reading course
- A noncredit addition to an existing course
- An extracurricular activity (pp. 41-42)

2. The Previous Studies

For EFL elementary school learners, Y. S. Lee and K. J. Kim (2011) conducted qualitative research that investigated six elementary school students' perceptions of extensive reading and its influence on their English language learning. According to the results, ER helped the learners increase both vocabulary and grammar. More importantly, the authors emphasized how critical the role of teachers and parents is for the learners to be successful in extensive reading. For secondary school learners, the effect of ER has been proven in EFL secondary school settings. Iwahori (2008) reported the effectiveness to enhance the EFL high school learners' general English language proficiency as well as reading fluency such as reading rate. In Korea, I. Shin and B. Ahn (2006) reported that the long texts with Korean glosses group showed the most significant increases based on the

mean score of reading words per minute, while the long texts without Korean glosses group showed the least increase among all the groups; that is, the readers tend to read more, focusing on meaning when they are provided with long text types with a help of Korean glosses, compared to the long texts without Korean glosses group. S. Choi (2010) explored the effectiveness of extensive reading on EFL high school learners' affective factors such as self-confidence, interest, and motivation; the results indicated that extensive reading positively changed most of the learners' attitudes toward reading, self-confidence, and motivation. In addition, extensive reading helped improve the learners' writing skills as well as reading skills. As a correlation between other language skills, H. S. Ahn, B. B. Im, and S. D. Yoon (2010) investigated the relationship between the effectiveness of extensive reading for middle school students and their writing skills; the results indicated that the extensive reading group statistically performed better on both grammar and writing than the textbook-based reading group; that is, extensive reading, which provided a variety of authentic and comprehensible input-rich reading materials self-selected by the learners, had more positive effects on grammar and writing skills as well as reading skills. K. H. Cho and J. W. Lee (2010) also analyzed how 40 high school students practically performed extensive reading activities (such as book club school settings), and how the extensive reading activities changed the students' cognitive and affective reading processes. The results indicated that extensive reading can be an alternative for English reading instruction, especially for self-regulated readers who are motivated to read more for pleasure as an extracurricular activity. The teachers' role when teaching extensive reading can be different from a traditional role in that the teacher, as a facilitator, can be involved in the extensive reading activity with students. As a long-term approach, extensive reading should be applied to school settings in order to encourage the motivated readers to enjoy reading itself, focusing on meaning without grammar-focused translation and follow-up comprehension tests as well.

H. Lee and M. Kim (2007) explored the effects of a graded extensive reading program (advanced/intermediate/beginner) in school settings by analyzing qualitative data from student surveys, interviews, and observations of students' reading. The results indicated that the graded ER program had positively affected students' attitudes toward language skills and reading at all three levels; furthermore, the intermediate-level students had the most positive attitudes toward reading in the pre-post surveys. In addition, the eight-month period of the ER program led the students to achieve better levels compared to their previous levels. With respect to the overall effects of extensive reading, J. Kim (2011) conducted a meta-analysis of the 21 previous studies of extensive reading studies, and found that extensive reading was positively effective on vocabulary (ES: 0.73), reading comprehension (ES: 1.06), reading speed (ES: 0.80), listening (ES: 1.94), and writing (ES: 1.04) skills. The results indicated that extensive reading helped readers not only improve their reading skills, but also other language skills such as listening and writing. In addition, elementary (ES: 1.33) and adult (ES: 1.8) groups gained more positive

effects than the secondary (ES: 0.55) groups among the age groupings; that is, it is likely that secondary students are intrinsically less motivated to read for pleasure.

For EFL adult learners, Sun (2003) reported the usability of a program of extensive reading online (ERO), and perception of EFL college level learners on ERO and extensive reading in Taiwan. The study indicated that the learners showed positive attitudes toward the ERO with some technical drawbacks. E. M. Yang (2010) examined the effects of extensive reading in college English classes in terms of language gains, reading speed, grammar, and vocabulary learning. To this end, she divided college students into two groups: an extensive reading group (ERG) and a modified extensive reading group (MERG). The MERG had limited freedom in choosing reading texts compared to the ERG, and the assignment for the MERG had characteristics of intensive reading. The results indicated that extensive reading significantly affected both the ERG and MERG students' reading speed, grammar, and vocabulary; but no statistical significance was found in reading speed gains between the two groups. Additionally, extensive reading had a positive effect on both groups' attitudes toward reading. K. M. O, E. J. Kim, and J. Yang (2009) explored how extensive reading assessments are designed and managed during or after extensive reading. To this end, the researchers conducted a questionnaire survey and in-depth interviews, and analyzed the reading tests that 28 college instructors used in college English courses. Surprisingly, most of the reading tests that the instructors designed and managed were in the form of intensive reading assessments such as grammar-translation-based multiple choice tests; this was attributed to the constraints of class sizes and students' preferences. Especially in extensive reading, assessments are not normally recommended for teachers in that they might dissuade readers from reading extensively and encourage them to focus instead on content rather than the enhancement of language skills. Furthermore, intensive, reading-based assessments should be applied less often in order to encourage readers to focus on reading content and meaning. Rather, previous studies recommend extensive reading assessments such as short book reports and tests and reading speed enhancing readers' self-regulation and reading fluency. H. J. Min and J. H. Han (2011) investigated how a guided book club program of extensive reading affects college students' language fluency and flexibility in terms of language creativity. Based on a Lexile index of Scholastic Reading Inventory (SRI: an experimental instrument), the researchers evenly divided sixty college students into two groups: a treatment group (content fiction- and non-fiction-based guided reading program) and a control group (content area-restricted guided reading program) in order to discover how different reading genres affected the college students' language fluency and flexibility in extensive reading. Pre-post repeated measures were used to compare the two groups. The results indicated that the treatment group performed better in language fluency than the control group; that is, a various genres-based guided reading program had a positive effect on improving the college students' language fluency rather than a genre-restricted guided reading program in terms of extensive reading programs. The treatment

group also performed better on language flexibility than the control group in that comprehensible input (Krashen, 1993) is considered critical for readers attempting to acquire languages; the more comprehensible input that is provided, the more readers are able to understand the content. D. S. Han (2004) implemented a graded ER program with EFL university-level students from diverse majors taking a general English course, and observed whether both intensive reading in a regular course and an extracurricular-based ER program could be applied such that they would affect the students' English proficiency during the semester. She employed intensive reading in a regular three-time English course, and divided the students into advanced, intermediate, and beginner level readers for extensive reading outside of the classroom. The ER program activities consisted of sustained silent reading, reading aloud, and book club and literature circles depending on the students' reading levels. The results indicated that the extracurricular-based ER program had a positive effect on changing the students' attitudes toward reading for pleasure. With respect to the pedagogical implications, the researcher argued that properly graded ER materials within the learners' English proficiency are one of the significant keys for successful ER programs, and a curriculum-based ER program in addition to the regular general English course should be required in that EFL university level students had previously been exposed to large quantities of intensive reading-based reading instruction from secondary schools.

For EFL teachers, Haider and Akhter (2012) surveyed 100 in-service secondary EFL teachers in Bangladesh in order to examine how they implement and perceive extensive reading in the classroom. Most of the teachers showed positive beliefs about the benefits of extensive reading; however, the techniques that they implemented in class generally promoted intensive reading. The researcher therefore argued that the educational stakeholders need to understand how important extensive reading is and combine extensive reading as well as intensive reading; teacher training should be focused on extensive reading as well. In Korea, J. H. Byun (2011) explored fourteen secondary English teachers' motivation and confidence in extensive reading during a teacher training period. Qualitative methods such as observation, learner journals, surveys, and interviews were used to analyze the effectiveness of extensive reading on teachers' affective factors such as motivation and confidence. The results indicated that the teachers' hands-on experience in extensive reading made them become motivated extensive readers and more confident in their ability to implement extensive reading programs that would provide comprehensible input-rich environments for their students in school. With respect to the limitations of implementing extensive reading programs in school, the teachers pointed out the issues involving the English curriculum, assessments, and insufficient infrastructure such as space for an extensive reading library and insufficient school support.

III. METHOD

1. Participants

Three high schools that have run different ER programs were recruited for this study. These schools were conveniently selected rather than randomly selected. One hundred seventy students from three different high schools (E, H, & B high schools) participated in this study. All of the students were in the second grade level. The schools are located in an urban area: E school in Daejeon, H school in Seoul, and B school in Inchon in South Korea. B school and E school are coeducational schools and H school is a boys-only school. Table 1 shows the number of students who participated in this study from each school. More details are addressed in the results section.

TABLE 1
Number of Students From Each School

School	Number	Percent
E high school	71	41.8
H high school	53	31.2
B high school	46	27.0
Total	170	100.0

2. Treatment: ER Program

Each school's ER program has its own features and is different from the other schools' ER programs. The features of each school's ER program are summarized in Table 2.

TABLE 2
Features of Each School's ER Program

	E high school	H high school	B high school
Curriculum	extra curricular	embedded into	embedded into
Class subject	N.A.	English	English
Language as the medium	Korean	Korean	Korean
Class time	no class	1 class period per week	1 class period per week
Duration	8 weeks	8 weeks	8 weeks
English reading material	Graded readers: Scholastic Reading Inventory (SRI)	randomly selected books and magazines in various genres	Graded readers: scholastic action series, foundation reading library levels 2-7
In class activity	N.A.	reading log, book report*	group reading, comprehension questions
Follow-up activity	written book reviews	creation of ER portfolios	no activity after class
Evaluation	grading of book reviews	no evaluation	no evaluation
Teacher's role	facilitator and manager; grader of book reviews	Manager: fills out check-list recording students' behavior	Manager: creates groups, provides word lists and comprehension questions

One teacher from each school collaborated with researchers on this study. The teachers were charge in the ER program at each school. The brief information about the teachers is summarized in Table 3.

TABLE 3
Information About Teachers

	E high school	H high school	B high school
Gender	female	female	female
Age	33	36	32
Amount of teaching experience	over 10 years	over 12 years	over 7 years
Teaching subject	English	English	English
Native language	Korean	Korean	Korean
English proficiency	High	High	High

1) E High School

The most critical feature in the E high school's ER program was that it was extra-curricular and that its purpose was to promote free voluntary or pleasure reading; it was not embedded into the curriculum. This feature clearly distinguished it from the other schools' ER programs. In terms of evaluation, the teacher in charge of the ER program gave almost full grades to students who handed in their book reviews; that is, the evaluation was not strict but very generous and thus was a very limited element in the ER program.

2) H High School

The H high school's ER program was embedded into curriculum, and this was different from the E high school's ER program. Unlike the other schools which used commercial graded readers as reading materials for students, the H high school's ER program provided students with books and magazines randomly selected by teachers in charge of the ER program. Students read what they wanted to read by selecting from provided reading materials according to their own reading speed, manner, and style. The teacher gave students limited helps such as selecting a reading material and comprehending words when the students asked the teacher. There was no evaluation of student performance or activity with respect to the ER program, but students had to submit two book reports at least each semester.

3) B High School

The B high school's ER program was embedded into the curriculum. The class was

divided into groups of four or five, and the whole class read a same reading material. Students read the material individually in the group reading, but they asked each other for their comprehension for the sentences and meaning of words whenever they needed. English proficiency levels of students in each group were various from low to upper intermediate since the teacher composed each group on purpose. The teacher's role was more explicit than that of other schools' teachers by creating groups and providing word lists and comprehension questions etc.

3. Instruments

Two main instruments were used in this study: a reading comprehension test and a survey. The following is a brief description of each instrument.

1) Reading Comprehension Test

The reading comprehension section of English tests from the National Assessment of Educational Achievement (NAEA) was used to measure the reading proficiency of the participants. The NAEA is a standardized assessment developed and administered by Korea Institute for Curriculum and Evaluation (KICE)[1]. Sub-tests of the NAEA include Korean language, sociology, math, science, and English. The NAEA is administered to the sixth grade in a primary school, the third grade in a middle school, and the first or second grade in a high school across the nation every year.

This study used the English test which was administered to second-year students in a high school. The test items for this study were excerpted from the reading comprehension part of the English tests of the NAEA administered in 2008. The reading comprehension test for this study had 17 multiple choice questions and five short answer questions. The length of a reading passage for each question is approximately from 80 to 130 words. The five short answer questions consist of four 'fill in the blank or blanks with a word' items and one 'rearrange provided words to make a sentence' item. The scoring scheme for the five short answer questions was developed by KICE and researchers for this study followed the scheme. Each multiple choice question was worth 1.5 points, two short answer questions were worth four points, and three short answer questions were worth two points. A perfect score would, therefore, be 39.5 points. A time limit of 50 minutes was given for the participants to complete this test.

[1] KICE is a government-funded educational research institute (www.kice.re.kr).

2) Survey

The two researchers in this study developed a survey to explore the participants' reading attitudes and to seek their opinions about the effectiveness of the ER programs. The survey was a questionnaire employing a 5-point Likert scale: The format of an item was 'strongly disagree', 'disagree', 'neutral', 'agree', and 'strongly agree'. The survey was composed of 30 items. Factor analysis (FA) was conducted and two main factors were selected for this study as follows: 1) reading attitudes (4 items), and 2) the effectiveness of the ER program (5 items). The survey was written in Korean and thus the students had no difficulty understanding the items. The internal consistency of reliability for the survey was Cronbach's Alpha, 0.78 or better.

4. Data Collection and Analysis

Data collection procedures were administered in each school through the second semester in 2011. The procedures took place in order as follows: the pre-reading comprehension test was administered at the beginning of the semester, while the post-reading comprehension test and the survey were administered about 10 weeks later. These procedures took place at each of the schools. The dates for the data collection were not exactly same for each of the three schools, but a time variation among the schools was within one week.

For the data analysis, diverse statistical analyses were employed: descriptive statistics, a paired samples *t*-test, a one-way ANOVA, and a Kruskal-Wallis test. The paired-samples *t*-test was conducted to determine the effect of each school's ER program; and for an effect size, Cohen's d was calculated. A one-way ANOVA was conducted to determine the difference in effects among the three schools' ER programs. A Kruskal-Wallis test for a non-parametric analysis was conducted to analyze students' attitude on the ER programs. Throughout the analyses, a 0.05 alpha level was set for a significant test.

For further analysis, the students were categorized into three different levels (advanced, intermediate, and beginner) in order to explore the differences in the effects of the ER programs by student proficiency level. The following method used to divide the students into the three groups. The students were divided according to their standard deviation (*SD* = 9.77) distance from the mean (*M* = 18.37) of the pre-test reading comprehension scores. The 'advanced level' students were those who scored over one standard deviation and higher (18.37 + 9.77 = 28.14), while the 'beginner level' students were those who scored one standard deviation and below (18.37 - 9.77 = 8.60) the mean of the pre-test reading comprehension scores. Accordingly, students who scored between plus one standard deviation and minus one standard deviation of the mean were categorized as at an 'intermediate level'. The number of students in each proficiency level is shown in Table 4.

TABLE 4
Number of Students of Each Proficiency Level

Proficiency levels	Frequency	Percent
Advanced	34	20.0
Intermediate	100	58.8
Beginner	30	17.6
Missing	6	3.5
Total	170	100.0

Some important assumptions for the statistical analysis were checked with the collected data (reading comprehension test scores). First, any particular participant's scores on the reading comprehension tests were not affected by the scores of all other participants, and thus the participants' scores were independent. Second, the assumption of normality was examined with skewness and kurtosis, and it was concluded that the assumption of normality for this data was tenable.

IV. RESULTS

Overall, according to the pre-test scores, there were significant differences in reading comprehension ability across the three schools. More specifically, H high school students' reading comprehension ability was better than both E and B high school students', but there was no difference between E and B high school students' reading comprehension ability.

1. Effects of the ER Programs

In order to discover whether an ER program increased the students' reading comprehension ability, the students' pre- and post-reading comprehension test scores were analyzed. A paired-samples *t*-test was applied for the statistical analyses. The students' mean English reading comprehension score (M = 20.40) in the post-test was higher than the mean score (M = 18.37) of the pre-test (see Table 5). According to the result of a paired-samples *t*-test (see Table 6), the difference between the pre-test scores and the post-test scores of students was statistical significant (t = 4.524, df = 161, $p < 0.01$). This result indicates that the ER program increased the students' reading comprehension ability. In particular, according to a widely used interpretation key of the magnitude of effect sizes that was established by Cohen (1988), the effect size was small (d = 0.20), indicating that the effectiveness of the ER program was low.

TABLE 5
English Reading Comprehension Test Scores

	Mean	*SD*	*n*
Pre-test	18.37	9.772	164
Post-test	20.40	9.621	162

TABLE 6
Paired-Samples *t*-test: English Reading Comprehension Test Scores

	Mean difference	*SD*	Cohen's *d*	*t*	*df*	*Sig.*
Pre-test — Post-test	1.97	5.540	0.20	4.524	161	0.001*

$*p < 0.05$

2. Effects of the ER program of Each School

In order to explore to what degree the ER program of each school influenced an increase in the students' reading comprehension ability, the students' pre- and post-reading comprehension test scores were analyzed. A paired-samples *t*-test was applied for the statistical analyses. The result for each school is as follows.

1) E High School

Table 7 shows the overall descriptive statistics (e.g., mean and standard deviations) for English reading comprehension in pre- and post-tests. The students' English reading comprehension scores ($M = 20.80$) in the post-test were higher than scores of the pre-test ($M = 16.43$). According to the result of a paired-samples *t*-test (see Table 8), the difference between the pre-test scores and the post-test scores of E high school students was statistically significant ($t = 6.582$, $df = 65$, $p < 0.01$).

TABLE 7
English Reading Comprehension Test Scores: E High School

	Mean	*SD*	*n*
Pre-test	16.43	10.14	66
Post-test	20.80	8.93	66

TABLE 8
Paired-Samples *t*-test: English Reading Comprehension Test Scores

	Mean difference	*SD*	Cohen's *d*	*t*	*df*	*Sig.*
Pre-test - Post-test	4.3712	5.3954	0.46	6.582	65	0.001*

$*p < 0.05$

This result indicates that the ER program of E high school influenced an increase in the students' reading comprehension ability. In particular, according to a widely used interpretation key of the magnitude of effect sizes that was established by Cohen (1988), the effect size was medium ($d = 0.46$), indicating that the effectiveness of the ER program was moderate.

2) H High School

Table 9 shows the overall descriptive statistics for English reading comprehension in pre- and post-tests. The students' English reading comprehension scores (M = 22.65) in the post-test were very slightly higher than the scores (M = 22.28) of the pre-test. According to the result of a paired-samples t-test (see Table 10), the difference between the pre-test scores and the post-test scores of E high school students was not statistically significant (t = 0.509, df = 50, p = 0.613).

TABLE 9
English Reading Comprehension Test Scores: H High School

	Mean	*SD*	*n*
Pre-test	22.28	9.59	51
Post-test	22.65	10.42	51

TABLE 10
Paired-Samples t-test: English Reading Comprehension Test Scores

	Mean difference	*SD*	Cohen's *d*	*t*	*df*	*Sig.*
Pre-test — Post-test	0.37	5.2277	0.04	0.509	50	0.613

This result indicates that the ER program of H high school did not produce an increase in the students' reading comprehension ability. In addition, the effect size (d = 0.04) was also very small, indicating that the effectiveness of the ER program was very limited. On the other hand, the pre- and post-test scores of the H high school students were higher than those of the other two school students, which indicates that the H high school students' reading comprehension ability was better than that of the other two schools' students.

3) B High School

Table 11 shows the overall descriptive statistics for English reading comprehension in pre- and post-tests. The students' English reading comprehension scores (M = 17.26) in the post-test were very slightly higher than the scores (M = 17.00) of the pre-test. According to the result of a paired-samples t-test (see Table 12), the difference between the pre-test scores and the post-test scores of E high school students was not statistically significant (t = 0.353, df = 44, p = 0.726).

TABLE 11
English Reading Comprehension Test Scores: B High School

	Mean	*SD*	*n*
Pre-test	17.00	8.19	45
Post-test	17.26	9.02	45

TABLE 12
Paired-Samples *t*-test: English Reading Comprehension Test Scores

	Mean difference	*SD*	Cohen's *d*	*t*	*df*	*Sig.*
Pre-test — Post-test	0.26	4.8625	0.03	0.353	44	0.726

This result indicates that the ER program of B high school did not produce an increase in the students' reading comprehension ability. In addition, the effect size (d = 0.03) was also very small indicating that the effectiveness of the ER program was very limited. On the other hand, the post-test scores of B high school students were the lowest among the three schools' students, which means that B high school students' reading comprehension ability was lower than that of the other two schools' students.

To briefly summarize the results presented above, the ER program which the E high school applied was effective in terms of increasing students' English reading comprehension ability whereas the ER programs of the H high school and the B high school were not significantly effective.

3. Comparison of Differences in Effects Among the ER Programs

In order to explore if there is differences among the effects of the ER programs, the mean gain scores (i.e., post-test scores — pre-test scores) of the students were compared among the schools. A one-way ANOVA was conducted for the statistical analyses: the Dependent Variable (DV) was the mean gain score and the Independent Variable (IV) was the school. The result is as follows.

Table 13 shows that the mean gain score of the E high school students was much higher than that of the H and B high schools, and the difference in the mean gain scores between H high school and B high school was very limited. A significant difference was found among the schools on the dependent measure, F (2, 159) = 11.89, $p < 0.05$, $\eta^2 = 0.130$ (see Table 14). This indicates that there were differences in the effects of the ER programs among the schools.

TABLE 13
Mean Gain Score of Each School

	Mean gain score	*SD*	*n*
E high school	4.37	5.40	66
H high school	0.37	5.23	51
B high school	0.26	4.86	45

TABLE 14
ANOVA (Dependent Variable: Mean Gain Score)

Source	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig*.	Partial Eta Squared
Corrected Model	642.958a	2	321.479	11.890	0.000	0.130
Intercept	438.618	1	438.618	16.223	0.000	0.093
School	642.958	2	321.479	11.890	0.001*	0.130
Error	4298.888	159	27.037			
Total	5570.000	162				

$*p < 0.05$

Because the ANOVA on the differences of the mean gain scores among the schools was significant, follow-up tests to the ANOVA were performed. The follow-up tests consisted of conducting pair-wise comparisons to find which two schools showed a significant difference in the difference of the mean gain scores. The Bonferroni method was used to avoid inflating the overall type I error rate. Accordingly, the pair-wise comparisons were tested at 0.05 divided by 3 (i.e., the number of comparisons) or the 0.017 level; the two comparisons (i.e., between E and H high schools, and between E and B high schools) were significant. This information is summarized in Table 15. This result indicates that the ER program of E high school was significantly different from the ER programs of B and H high schools in terms of the effect, and there was no difference between the ER programs of B high school and H high school.

TABLE 15
Pair-Wise Comparisons of Mean Gain Scores by Schools

Dependent Variable	(I) School	(J) School	Mean difference (I – J)	*Sig*.
Mean gain scores	E high school	H high school	3.999	0.001*
Mean gain scores	E high school	B high school	4.116	0.001*
Mean gain scores	H high school	B high school	0.117	0.913

$*p < 0.017$

4. Survey Results

1) Students' Overall Reading Attitude

In order to examine the students' overall reading attitudes or habits, the following four questions were asked: 'I like reading books', 'I search for a book that I want to read, and I read it', 'I only read a book provided by my parents or under a teacher's direction', 'I don't like reading books, but I often read a newspaper or magazine'.

TABLE 16
Students' Overall Reading Attitude

School	Median	*SD*	*n*
E high school	3.75	0.72696	71
H high school	3.50	0.78548	53
B high school	3.63	0.69194	46
Total	3.75	0.73279	170

Table 16 shows the median scores for the students' overall reading attitudes. The median score (M = 3.75) for all of the students indicates that the students' reading attitudes seem moderate. The B high school students' median score was highest followed by the E high school students' median score which was followed by the H high school students' score. The Kruskal-Wallis test, however, indicates that there is no significant difference in the medians ($\chi^2(2, 170) = 0.174$, $p = 0.917$). This result indicates that the students' reading attitudes in one school was not significantly different from that of another school.

2) Differences in Students' Reading Attitude by Reading Proficiency Levels

Table 17 shows students' reading attitude scores at each reading proficiency level. The advanced reading proficiency level students showed the most positive reading attitude (M = 4.00) followed by the intermediate reading proficiency level students (M = 3.75); the beginner reading proficiency level student showed the least positive reading attitude (M = 3.38); thus, the higher the students' reading proficiency level was, the more positive the students' reading attitude was.

TABLE 17
Students' Reading Attitude by Reading Proficiency Levels

Proficiency level	Median	*SD*	*n*
Advanced	4.00	0.840	34
Intermediate	3.75	0.717	100
Beginner	3.38	0.616	30
Total	3.63	0.734	164

The Kruskal-Wallis test indicates that there was a significant difference in the medians ($\chi^2(2, 164) = 7.016$, $p < 0.05$). This result indicates that the reading attitudes of students in one proficiency level were significantly different from that of students in another proficiency level. Because the overall test was significant, follow-up tests to the Kruskal-Wallis test were performed. The follow-up tests consisted of conducting pairwise comparisons using the Mann-Whitney U test to find which two proficiency levels showed a significant difference in the reading attitude. The Bonferroni method was used to avoid inflating overall type I error rate. Accordingly, the pairwise comparisons were tested at 0.05 divided by 3 (i.e., the number of comparisons) or 0.017 level. According to results of

the comparisons, only the comparison between advanced and beginner levels was significant (z = -2.581, p < 0.017). This result indicates that the advanced level students' reading attitude is more positive than the beginner level students' reading attitude.

3) Students' Evaluation on Their ER Program

In order to examine how the students thought about their ER program, the following five questions were asked: 'I think the ER program is effective', 'The ER program enhances my interest in reading English books', 'The ER program lessens my fear of reading English books', 'The ER program helps me improve my English reading ability', 'The ER program helps me improve my English proficiency'. Table 18 shows the median scores for the students' evaluations of their schools' ER programs. The median score (M = 3.00) of all students indicates that the students' evaluation of their ER programs were neutral. The B high school students' evaluation score was the same with the H high school students' score, which was higher than the E high school students' score. The Kruskal-Wallis test, however, indicates that there was no significant difference in the medians ($\chi^2(2, 130) = 5.462$, $p = 0.07$). This result indicates that there was no difference in the students' evaluation on their schools' ER programs. Interestingly, comparing the results of the effects of each school's ER program presented above, the E high school students evaluated their ER program most negatively even though only the E high school's ER program showed significant effects.

TABLE 18
Students' Evaluation on Their ER Program

School	Median	*SD*	*n*
E high school	3.00	0.671	33
H high school	3.20	0.671	52
B high school	3.20	0.651	45
Average	3.00	0.668	130

V. CONCLUSION

First, the purpose of this study was to examine the effectiveness of extensive reading on high school EFL students' reading ability. Second, if extensive reading were effective, then we wondered whether there would be significant school differences between high schools that ran different extensive reading programs. Third, we questioned which a particular extensive reading program would be more efficient when examining the learners' pre-post reading scores. Finally, we also triangulated survey data to answer the query with respect to the learners' attitudes toward reading and their motivation for reading.

The results of the pre-post repeated measures indicated that extensive reading was statistically effective on improving the learners' reading ability. This finding is consistent with the previous studies (H. S. Ahn, B. B. Im, & S. D. Yoon, 2010; J. H. Byun, 2011; S. Choi, 2010; B. Kim, 2012; Y. S. Lee & K. J. Kim, 2011; S. S. Park & W. H. Kang, 2004). In particular, with respect to school differences, the extensive reading program of E school was statistically significant while the other two ER programs were not. In terms of comparing two different extensive reading programs—an extracurricular-based program and a curriculum-based program—the extracurricular-based extensive reading program was more effective than the curriculum-based extensive reading program in the high school setting. D. S. Han (2004) explained the reason for this, stating that the extracurricular-based ER program might have created more positive attitudes on the part of the learners because they were reading for pleasure. Day and Bamford (1998) also argued that the participation in an extracurricular-based ER program is entirely based on the participants' interests, so they might therefore be more highly motivated to read and have a more positive attitude toward reading itself. In addition, the lack of pressure caused by assessments may have allowed them to enjoy their reading more. This finding might have a significant pedagogical implication for language teachers who wonder how extensive reading should be dealt with in school settings.

According to the survey results, most of the learners showed positive attitudes and motivation toward extensive reading; especially, the advanced learners showed the most positive attitudes (M = 4.00) toward extensive reading followed by the intermediates (M = 3.75) and beginners (M = 3.38). Thus, the higher the learners' reading proficiency level was, the more positive the learners' reading attitude was or vice versa.

All of the students showed neutral attitudes toward their ER programs according to the learners' evaluations. Surprisingly, E high school students showed more negative perception of extensive reading, but the extracurricular-based program was statistically significant compared to the programs.

Compared to E school and B school, which used similar ER programs, E school with an extracurricular-based ER was more effective than B school with its curriculum-embedded ER. With respect to B school (Scholastic ER) and H school (teacher-centered voluntary ER), there was no significant difference between the two schools which had integrated their ER into curriculum. Overall, it is important to note that neither a commercial nor a voluntary ER program made a significant difference; but whether the ER was integrated into the curriculum or extracurricular did make a significant difference in the high school EFL students' reading ability. We can say then that an extracurricular-based extensive reading program is more efficient for high school EFL students, perhaps because they are reading for pleasure. It certainly seems to lead to the achievement of better reading scores.

With respect to pedagogical implications, it seems to be evident that ER is an effective

approach to the enhancement of high school EFL students' reading abilities, and educational stakeholders, including teachers, should support an extensive reading program in their EFL curricula as Haider and Akhter (2012), and J. H. Byun (2011) previously argued. Teacher education should also be focused on extensive reading implementation for EFL teachers. In particular, with extensive reading programs, extracurricular-based extensive reading, no matter what the level of the EFL learner, seems to be more appropriate than curriculum-based extensive reading which resembles a regular reading class with the pressure of assessment and 'a lockstep manner' (Day & Bamford, 1998, p. 26). According to Day and Bamford (1998), a lockstep manner in which all readers should read the same text at the same speed might demotivate learners' attitudes toward reading; it may also prevent the learners from enjoying reading in the end. Especially for beginner level learners, extensive reading may be significant in bridging the gap in language and reading skills as well.

With respect to research limitations and future research, this study was conducted in a short period of time with relatively small samples in a particular region so that future research should be longitudinal with a more generalizable sampling. In addition, we could not answer the question of why extensive reading is more effective for intermediate and beginner level learners than for advanced level learners in this study. Thus, future research should attempt to answer that question. Finally, all three extensive reading programs suggested should be further researched within a framework of intensive and extensive reading approaches for different age groups in different school settings.

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Examples in: English
Applicable Languages: English
Applicable Levels: Secondary education

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