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Extensive Reading and Memory Improvement through
English Vocabulary Knowledge and Reading
Comprehension: A Large-Scale Correlational Study

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บทคัดย่อ

การศึกษานี้ศึกษาความสัมพันธ์ระหว่างการอ่านอย่างกว้างขวาง การรับคำศัพท์ และความเข้าใจการอ่านด้วยกิจกรรมเน้นฝึกความจำ ผู้ร่วมจำนวน 506 รายได้เข้าร่วมโครงการการอ่านอย่างกว้างขวางเป็นเวลา 4 เดือน ซึ่งเป็นส่วนหนึ่งของหนังสืออ่านนอกเวลาที่กำหนดให้อ่านก่อนเข้าทดสอบในการสอบหนังสืออ่านนอกเวลาซึ่งข้อคำถามเน้นการทดสอบความจำ คะแนนผลการสอบหนังสืออ่านนอกเวลาได้นำมาเปรียบเทียบกับคะแนนสอบกลางภาคและคะแนนสอบปลายภาค การวิเคราะห์ถดถอยแสดงว่ามีความเข้มของความสัมพันธ์เชิงบวกน้อยระหว่างผลการสอบหนังสืออ่านนอกเวลากับคะแนนส่วนคำศัพท์และการอ่านโดยเฉพาะอย่างยิ่งในคะแนนที่ปรากฏช่วงสอบปลายภาคเมื่อเทียบกับคะแนนที่ปรากฏช่วงสอบกลางภาค ในเชิงการเพิ่มความจำ ผลการศึกษาระบุว่ามีความสัมพันธ์ระดับค่อนข้างมากระหว่างข้อสอบที่เน้นการทดสอบความจำกับการพัฒนาความจำแต่แลกมากับความสามารถเชิงปริชานอื่น เช่น ความเข้าใจ

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Abstract

This large-scale correlational study explored the possibility of the correlation between extensive reading, vocabulary acquisition, and reading comprehension using memory-oriented tasks. The participants were first-year undergraduate Thai students ($n = 506$) who had taken a four-month comprehensive reading program as a part of required external reading before they took an external reading test with test items focused on memory elicitation. The participants' scores from the external reading test was then compared with the scores from their midterm and final examinations. Regression analysis showed a weak positive correlation between the test scores on the external reading test and the scores from vocabulary and reading sections, especially with regard to the final examination, compared with the scores from the midterm examination. In terms of memory enhancement, the results indicated a modest correlation between the test aimed at memory elicitation and memory improvement, but at the expense of other cognitive faculties, such as comprehension. The pedagogical implication is that extensive reading, to a certain extent, helps improv both their reading and vocabulary.

Keywords: Extensive reading, Reading Comprehension, Memory, Vocabulary

Introduction

Although there are many reading definitions, Grabe and Stoller (2019) defined reading as the ability to draw meaning from the text and appropriately interpret it. Reading has been considered one of the essential elements in language learning and developing schematic knowledge for the first and second languages. There are two main types of reading: intensive reading and

extensive reading. Intensive reading being put aside here, the notion of reading focused on quantity rather than quality is generally developed under the term extensive reading. Extensive reading was defined as reading many materials with great comprehension and minimal or no help from external references (Waring, 2023). Extensive reading has gained traction for decades with rapid development in graded readers compared with their nascent years. Day and Bamford (2002) propose ten principles to help make extensive reading possible in the classroom. Lems et al. (2018) argued that extensive reading allowed learners to encounter various linguistic forms interacting with each other and build meta-cognitive knowledge.

Several studies were conducted on the relationship between extensive reading and other abilities. Sakurai (2017) finds a statistically significant relation between the amount of reading and the mean scores of vocabulary and grammar. Carney (2019) finds no correlation between extensive reading and TOEIC score performance but speculates that the study period might be the factor. Davoudi et al. (2017) investigated the relationship between extensive reading and English language proficiency in Iranian intermediate learners. They revealed that the group that engaged in extensive reading outperformed the groups that did not take part in extensive reading. Giraldo and Arango-Tobón (2022) conducted research with 57 participants and found a relation between extensive reading and working memory in that extensive reading enhances cognitive faculty. Chun et al. (2012) conducted the study with 26 participants and reported that extensive reading affects long-term vocabulary retention. However, little research has been conducted in a large-scale manner.

Research Questions

To what extent can extensive reading predict the sub-scores of the pre-intermediate university final exam in an English compulsory course?

To what extent does memory training affect scores in seen and unseen passages in the midterm and final exams?

Literature Review

Extensive Reading in East Asia

The seminal work of Krashen (2007) surveyed studies on extensive reading, revealing that out of 19 studies, 12 have been conducted in Asia. Another study in Asia has argued that extensive reading benefits adult learners and high school students (Ferdila, 2014). Apart from English, a study has confirmed the benefits of extensive reading in Chinese (Zhou & Day, 2020).

In Thailand, on vocabulary, the study with 67 students considered vocabulary size and found that online multimedia-based extensive reading proved effective statistically using regression (Chavangklang et al., 2019). Promluan and Sukying (2021) found that productive vocabulary knowledge in learners was improved after engaging in extensive reading programs. On reading, Maipoka and Soontornwipast (2021) found that integrated intensive and extensive reading instruction could improve reading comprehension. Singkum and Chinwonno (2021) used extensive reading with Thai vocational students and found that their reading scores were enhanced based on the TOEIC reading section test. Wisajorn (2017) and Dhanarattigannon (2022) suggested that extensive reading could improve reading skills, especially for low-achiever learners.

Extensive Reading and Classroom Application

There are many studies on applying extensive reading to classroom settings. Ferdila (2014) incorporated extensive reading in teaching reading to second-grader classes and found that it improved vocabulary learning, reading

comprehension, and learners' attitudes toward reading. Pongsatornpiwat (2021) used interactive group to improve reading skills through extensive reading. Syamsuddin (2021) argued that extensive reading could improve general English proficiency. Mermelstein (2015) found that extensive reading could improve writing skills. To sum up, extensive reading can improve literacy.

Extensive Reading and Graded Readers

Traditional reading material used for extensive reading is graded reader. On genre, the study in Japan supported the two-tier combination between general-graded readers and short-graded stories in liberal arts and sciences (Poulshock, 2010). On the length of graded readers, Holster et al. (2017) proposed that book length was the most reliable yardstick compared with other measures in the study, followed by Yomiyasusa Level at 68% and Lexile measure at 40%, respectively. On vocabulary difficulty level, the preliminary qualitative study found that self-assessment of word knowledge using graded readers could shed light on appropriate word levels for learners to choose (Wan-a-rom, 2010). Nation (2001) proposed that a minimum of 10 to 12 exposures was required for learning a new L2 word in context. This could be used as a yardstick for measuring recent word acquisition.

Extensive Reading and Vocabulary

Hudson (2007) contended that vocabulary was the critical predictor of successful reading and could be used as a proxy for appropriate reading material level for learners rather than grammar or reading material nature (Gardner, 2013). On vocabulary gain through extensive reading, in Taiwan, a study by Wang (2013) with 45 lower-level EFL Taiwanese learners reading 30 English texts for a 15-week extensive reading program showed a 6% to 15% gain in vocabulary acquisition. The test used was a traditional pre-test and post-test of the cohort. Alsaif and Masrai (2019) conducted a study on Saudi

learners to pinpoint the extent of vocabulary gain from extensive reading using vocabulary size as a proxy.

Methodology

Participants

The study included 506 students enrolling in a first-year English compulsory course at a higher education institute. Their language proficiency was assumed to be upper-elementary level, A2-B1, judged by in-class TOEIC mock test with the average total scores at approximately 400. The fields of study were Engineering, Information Technology, and Business Administration. The informed consent was obtained as implied consent under exceptions. Both researchers did not have direct contact with participants, and no personal details were present in the data set.

Research Instruments and Procedures

There were approximately 140 titles in Oxford Bookworms Library Factfiles. The graded reader selected for this course was Oxford Bookworms Library Factfiles Level 3: Information Technology, and learners would be tested on the book at the end of the semester. This book was described as B1. Students were expected to finish reading in 4 months, and, on a vocabulary front, access to digital dictionaries in the native language and English was prevalent. This pre-experimental study was conducted in a form similar to a one-group pre-test/post-test design (Allen, 2017). The midterm exam was treated as the pre-test, the final exam was treated as the post-test, and the separate extensive reading test was used as a proxy for memory elicitation. Both exams were developed based on the A2-B1 course book. The participants in this research only engaged in a compulsory extensive reading program for at least six months due to their speaking-oriented curriculum. The changes detected likely stem from the intervention used in this program.

The experiment was in a pre-post-test pattern adopted from studies of a similar nature (Huffman, 2014; Wisaijorn, 2017). A panel of faculty members has reviewed and edited the test used in both the pre-test midterm exam and the post-test exam, the final exam. For regression, this study adapted the use of regression analysis to explore the extent of interrelations between reading and other cognitive factors, in which vocabulary, grammar, and reading comprehension were variables. This study would also use these variables in the analysis (Klauda & Guthrie, 2008; Magno, 2010). The external reading test paper was based on the assigned graded reader. All test items were memory-based to elicit the result of memory training in that the choices either asked for specific numbers, such as notable years or proper names. On memory training, learners were informed that there would be an external reading test at the end of the semester. All test items involved specific details in the external reading material, and they were expected to memorize the notable information, such as proper names or numbers. Some notable details, proper names, and numbers in the external reading material would be asked randomly in class during class sessions.

For the midterm exam, there were four sections: vocabulary test—a fill-in-the-blank test focusing on vocabulary, dialogue test—a turning-taking dialogue in which some words or sentences in the dialogue were blank, and students were asked to choose the best answer from multiple choices: A, B, C, and D, reading comprehension containing seen and unseen passages, and grammar test. The number of seen and unseen passages test items were proportionate. All of them were multiple choices.

There were four sections in the final exam: vocabulary test—a fill-in-the-blank test focusing on vocabulary, dialogue test—a turning-taking dialogue in which some words or sentences in the dialogue were blank, and students were asked to choose the best answer from multiple choices: A, B, C, and D, reading comprehension containing seen and unseen passages, and grammar

test. The number of seen and unseen passages test items are proportionate. All of them were multiple choices.

External reading test was also in the form of multiple choices. The test items asked for specific information, such as proper names or numbers. To make the scores comparable, responses from participants would be expressed in a percentage form.

Data Analysis

The study chose two statistical analytic tools, t-test, and simple regression, because the former could compare two test sets, the midterm and final papers, after intervention. In contrast, simple regression could shed light on effect size in number.

Results

Scores from the external reading test and scores from the final exam were processed by Microsoft Excel 2019. Simple regression among four sections: vocabulary, dialogue, grammar, and reading comprehension to scores from external reading. For scores from external reading, at the beginning of this course, the selected graded reader, *Information Technology*, was provided to all students, and there were formal test sessions administered at the end of the semester in each section. There were approximately 20 sections and 506 participants in this course, and all test sessions were taken in the same week at approximately the same time with the same test paper. This examination was separate from the final examination because it might pose an undue burden to examinees if asked to answer more than 100 multiple-choice test items without breaks. It was a huge imposition and potentially produced inaccurate data due to fatigue. The results reveal that there was a weak correlation link between external reading and reading comprehension and vocabulary.

Table 1 External Reading and Final Exam

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.49579002
R Square	0.245807744
Adjusted R Square	0.239786249
Standard Error	0.152055804
Observations	506

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	4	3.775350021	0.943837505	40.82171315
Residual	501	11.58360474	0.023120968	
Total	505	15.35895477		

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.184272791	0.02401617	7.672863371	0.000000000
FIN (Read)	0.204277741	0.063626366	3.210583197	0.001409689
Fin Voc	0.179274273	0.051225745	3.499690902	0.000507344
Fin Dia	0.034051176	0.057504274	0.592150342	0.554017051
Fin Gra	0.056267133	0.038466122	1.462771129	0.144157046

Vocabulary test section scores between the midterm exam and final exam showed a Pearson Correlation at $\approx .73$. When performing test analysis and regression, the study reported the correlation between the scores of external reading and the last and midterm exam scores. The coefficients between extensive reading scores and the scores of the final exams were at $\approx .23$ compared with $\approx .18$ in the midterm vocabulary section scores, indicating that

the scores of the vocabulary section in the final exam were mainly influenced by extensive reading activity.

Table 2 External Reading and Midterm Vocabulary-Section Scores and Final Vocabulary-Section Scores

<i>Regression Statistics</i>	
Multiple R	0.482151638
R Square	0.232470202
Adjusted R Square	0.229418394
Standard Error	0.153089167
Observations	506

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	2	3.570499318	1.78525	76.17457457
Residual	503	11.78845545	0.023436	
Total	505	15.35895477		
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.224610231	0.020529314	10.94095	3.87189E-25
MID (Voc)	0.185376931	0.045520183	4.072412	0.00005404
Fin Voc	0.233243228	0.047227263	4.938741	0.00000107

Regarding reading, regression analysis showed a correlation between external reading scores and the reading comprehension section scores of the midterm and final exams at adjusted R square: $\approx .216$ and statistical significance at the reading comprehension section in the final exam at P-value: $\approx .00065$.

Table 3 External Reading and Midterm Reading-Section Scores and Final Reading-Section Scores

Regression Statistics	
Multiple R	0.46861771
R Square	0.219602558
Adjusted R Square	0.216499586
Standard Error	0.154367104
Observations	506

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>
Regression	2	3.372865754	1.686433	70.77168678
Residual	503	11.98608901	0.023829	
Total	505	15.35895477		
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	0.221631694	0.021975424	10.08543	6.57697E-22
MID (Read)	0.159858362	0.061482634	2.600057	0.009595
FIN (Read)	0.252002196	0.073425772	3.432067	0.000648

From Table 3, the P-value between midterm reading comprehension section scores and final exam reading comprehension section scores showed a positive correlation, but precisely what this significance attributed to was unclear. The nature of the reading passages was either seen or unseen, and students have been engaged in memory practice for months to score points in the extensive reading test. To investigate further, test items in the reading comprehension section were identified. In the midterm exam reading section, there were two types of passages: unseen passages, which test takers have

not read before, and seen passages, which test takers have seen during their class session, but the test items asked were different. The same pattern was repeated in the final examination paper. Next, the mean scores from the midterm and final exam reading sections were calculated (.598 and 0.579), respectively. Despite similar mean values, the mean scores were markedly different when comparing the seen and unseen passages. The midterm mean score is .549 in the seen passages, while the final exam mean score was 0.651. There was a .102 increase. The midterm mean score is .635 in the unseen passages, but the final-exam mean score is 0.546. There was a .089 decrease. T-test was used to observe statistical differences between scores from the seen and unseen midterm reading exam and the seen and unseen final reading exam. The comparison table reports a significant difference between midterm and final reading exams with Pearson Correlation at more than $\approx .7$ across seen, unseen, and total sections. The mean value of the seen final reading exam was higher than that of the midterm seen exam. In contrast, the mean value of the total score saw a modest drop to $\approx .58$. There was also a significant drop in the unseen passage section at $\approx .55$ compared with $\approx .64$ of the midterm reading exam.

Table 4. Midterm Seen-and-Unseen Reading Passages Scores and Final Seen-and-Unseen Reading Passages Scores

	<i>MID (SEEN)</i>	<i>FIN (SEEN)</i>		<i>MID (Read)</i>	<i>FIN (Read)</i>		<i>MID (UNSEEN)</i>	<i>FIN (UNSEEN)</i>
Mean	0.549802372	0.651185771	Mean	0.598983625	0.579314888	Mean	0.635869565	0.54685707
Variance	0.053281589	0.042151147	Variance	0.051830042	0.036340378	Variance	0.061507856	0.039552161
Observations	506	506	Observations	506	506	Observations	506	506
Pearson Correlation	0.7374817		Pearson Correlation	0.871296919		Pearson Correlation	0.810539757	
df	505		df	505		df	505	
t Stat	-14.2721632		t Stat	3.950556037		t Stat	13.78321734	
P(T<=t) one-tail	2.27944E-39		P(T<=t) one-tail	4.45327E-05		P(T<=t) one-tail	3.25059E-37	
t Critical one-tail	1.647876568		t Critical one-tail	1.647876568		t Critical one-tail	1.647876568	
P(T<=t) two-tail	0.00000		P(T<=t) two-tail	0.000089065		P(T<=t) two-tail	0.000000	
t Critical two-tail	1.964672639		t Critical two-tail	1.964672639		t Critical two-tail	1.964672639	

Discussion and Conclusion

Research Question 1: To what extent can extensive reading predict the sub-scores of the pre-intermediate university final exam in an English compulsory course?

The result showed a statistically significant correlation between extensive reading and reading comprehension of the final exam and vocabulary learning which agreed with many previous studies (Alsaif & Masrai, 2019; Boutorwick, et al. 2019; Carolina et al., 2019; Liu & Zhang, 2018; Manihuruk, 2020; Wang, 2013). The result also found a correlation between extensive reading and reading comprehension which agreed with many studies (Katenga & Mushunje, 2021; Pem & Sukavatee, 2022; Suk, 2017) despite some studies arguing in favor of skill emergence rather than language knowledge development (Carney, 2019; Chavangklang et al., 2019). In addition, with four months, students had a fair chance of looking up a handful of unknown words embedded in familiar texts.

On vocabulary, the data showed that extensive reading correlated with the final vocabulary exam more than its counterpart. This implies that the more extended learners are in the program, the stronger extensive reading scores. In addition, vocabulary knowledge is primarily concerned with word recognition (Milton & Fitzpatrick, 2014). It appears to be achieved easier than reading comprehension, which is multifaceted.

The same goes for reading comprehension in that there are relatively stronger relations between extensive reading and final-exam reading comprehension. Despite the stronger correlation, this information should be treated with caution. First, the figure shown is conditioned on a paltry adjusted r-square value. Further studies should be conducted to confirm the relations. Second, correctly answering reading comprehension required more than word recognition, as reading comprehension was more multifaceted (McCarthy & McNamara, 2021). Muijselaar et al. (2017) argued that vocabulary

was a subset of reading comprehension; therefore, changes in reading comprehension tend to lag behind changes in vocabulary.

Research Question 2: To what extent does memory training affect scores in seen and unseen passages in the midterm and final exams?

To investigate memorization, there are two kinds of reading passages in the test already-read and new passages. If extensive reading positively affected memorization, we would expect higher scores in seen passages. Based on Pearson correlation at $\approx .73$ for seen passages in midterm and final exams and $\approx .81$ for unseen passages in midterm and final exams, these two test sets were comparable. The scores from seen passages showed that the extensive reading test focusing on memorization—all test items in the extensive reading test asked learners to answer specific details in the reading material such as proper name and numbers—significantly affected seen-passage scores with the means score of $\approx .55$ in the midterm exam and $\approx .65$ in the final exam. At the same time, we observed a reverse effect on unseen passages in that students scored well in midterm unseen passages at a means score of $\approx .64$ but $\approx .55$ in final unseen passages. This, in turn, drove the mean score of the reading passage section to remain virtually unchanged (.60 for the midterm and .58 for the final exam). This trade-off is surprising and worrying because it indicates that memory training worked at the expense of other learning capabilities. Apart from the results of the two studies, more studies, and test specification types, should be done and tested to establish this fact.

Pedagogical Implications

Despite arguing causes for promoting extensive reading in general, findings from this study suggest that extensive reading could start bearing fruit, judging from the mean scores in the seen-and-unseen passages between the midterm and final exam in four months. However, more robust research

should be done to strengthen the claim further. Nevertheless, it is vital to have measures in place to hold students accountable (Zhou & Day, 2021). On this, graded reader software can come to instructors' rescue. Another possible middle ground between the learner-centered approach and the teacher-oriented approach in graded reader selection for the whole course is an online vote.

In case of the urgent need to promote vocabulary learning within four months, tests focusing on mnemonic test specification could produce meaningful increments at the expense of other faculties. To alleviate this washback effect, activities championing reading comprehension should be administered. One case in point would be a reading comprehension exercise focusing on comprehension rather than detail elicitation. Follow-up questions from the reading texts should be “why” and “how” rather than “when” and “what”.

Extensive reading should be included for vocabulary-concentrated courses such as business English, medical English, and hospitality English, namely, ESP courses. At best, the course should be extended well into four months to reap the benefits. To optimize the recurrence of unfamiliar specialized words such as bill of lading, letter of intent, remittance, and backlog, the title chosen should be related to the course title. In particular, for places with specific fields of study, each faculty might be given a unique and appropriate title to ensure motivation. However, the chosen title should be of the same difficulty level.

References

- Allen, M. (2017). **The Sage Encyclopedia of Communication Research Methods**. Thousand Oaks, CA: SAGE Publications.
- Alsaif, A., & Masrai, A. (2019). Extensive Reading and Incidental Vocabulary Acquisition: The Case of a Predominant Language Classroom Input. **International Journal of Education and Literacy Studies**, 7(2), 39-45.
- Boutorwick, T., Macalister, J., & Elgort, I. (2019). Two Approaches to Extensive Reading and their Effects on L2 Vocabulary Development. **Reading in a Foreign Language**, 31(2), 150-172.
- Carney, N. (2019). Gauging Extensive Reading's Relationship with TOEIC Reading Score Growth. **Journal of Extensive Reading**, 4(4), 69-86.
- Carolina, C. D., Yadira, C. M., Oswaldo, G. B., Antonio, B. M., & Antonio, U. L. (2019). The Effect of Extensive Reading on Vocabulary Knowledge of First Level University Students. **European Scientific Journal**, 15(13), 54-73.
- Chavangklang, T., Chavangklang, P., Thiamhuanok, S., & Sathitdetkunchorn, P. (2019). Development of EFL University Students' Vocabulary Size and Reading Comprehension Using Online Multimedia-Based Extensive Reading. **Advances in Language and Literary Studies**, 10(5), 146-151.
- Chun, E., Choi, S., & Kim, J. (2012). The Effect of Extensive Reading and Paired-Associate Learning on Long-Term Vocabulary Retention: An Event-Related Potential Study. **Neuroscience Letters**, 521(2), 125-129.
- Davoudi, M., Zolfagharkhani, M., & Rezaei, M. (2017). The Relationship between EFL Learners' Extensive Reading and English Language Proficiency. **Theory and Practice in Language Studies**, 6(3), 549-559.

- Day, R., & Bamford, J. (2002). Top Ten Principles for Teaching Extensive Reading. **Reading in a Foreign Language**, 14(2), 136-141.
- Dhanarattigannon, J. (2022). Effects of Additive Extensive Reading on Struggling Thai University Learners. **TEFLIN Journal**, 33(2), 240-256.
- Ferdila, R. (2014). The Use of Extensive Reading in Teaching Reading. **Journal of English and Education**, 2(2), 68-80.
- Gardner, D. (2013). **Exploring Vocabulary: Language in Action**. Hoboken: Taylor and Francis.
- Giraldo, C. M., & Arango-Tobón, O. E. (2022). The Relation Between Extensive Reading and Working Memory, Processing Speed, Learning Motivation and Literacy Skills in A Foreign Language. **Revista de Lingüística Teórica y Aplicada**, 60(2), 63-75.
- Grabe, W., & Stoller, F. L. (2019). **Teaching and Researching Reading**. New York: Routledge.
- Holster, T. A., Lake, J. W., & Pellowe, W. R. (2017). Measuring and Predicting Graded Reader Difficulty. **Reading in a Foreign Language**, 29(2), 218-244.
- Hudson, T. (2007). **Teaching Second Language Reading**. Oxford: Oxford University Press.
- Huffman, J. (2014). Reading Rate Gains during a One-Semester Extensive Reading Course. **Reading in a Foreign Language**, 26(2), 17-33.
- Katenga, J. E., & Mushunje, A. T. (2021). Reading Comprehension of Thai Students Improved by Extensive Reading When Learning English as a Foreign Language. **HUMAN BEHAVIOR, DEVELOPMENT and SOCIETY**, 22(3), 95-104.
- Klauda, S. L., & Guthrie, J. T. (2008). Relationships of Three Components of Reading Fluency to Reading Comprehension. **Journal of Educational Psychology**, 100(2), 310-321.

- Krashen, S. (2007). Extensive Reading in English as Foreign Language by Adolescents and Young Adults: A Meta-Analysis. **International Journal of Foreign Language Teaching**, 3(2), 23–29.
- Lems, K., Miller, L. D., & Soro, T. M. (2018). **Building Literacy with English Language Learners: Insights from Linguistics**. New York: Guilford Publications.
- Liu, J., & Zhang, J. (2018). The Effects of Extensive Reading on English Vocabulary Learning: A Meta-analysis. **English Language Teaching**, 11(6), 1-15.
- Magno, C. (2010). Korean Students' Language Learning Strategies and Years of Studying English as Predictors of Proficiency in English. **Teaching English to Speakers of Languages Journal**, 2, 39-61.
- Maipoka, S.-a., & Soontornwipast, K. (2021). Effects of Intensive and Extensive Reading Instruction on Thai Primary Students' English Reading Ability. **LEARN Journal: Language Education and Acquisition Research Network**, 14(1), 146–175.
- Manihuruk, D. H. (2020). The Correlation between EFL Students' Vocabulary Knowledge and Reading Comprehension: A Case Study at the English Education Department of Universitas Kristen Indonesia. **Journal of English Teaching**, 6(1), 86-95.
- McCarthy, K. S., & McNamara, D. S. (2021). The Multidimensional Knowledge in Text Comprehension framework. **Educational Psychologist**, 56(3), 196-214.
- Mermelstein, A. D. (2015). Improving EFL Learners' Writing through Enhanced Extensive Reading. **Reading in a Foreign Language**, 27(2), 182-198.
- Milton, J., & Fitzpatrick, T. (2014). **Dimension of Vocabulary Knowledge**. New York: Palgrave Macmillan.

- Muijselaar, M. M., Swart, N. M., Steenbeek-Planting, E. G., Droop, M., & Verhoeven, L. (2017). The Dimensions of Reading Comprehension in Dutch Children: Is Differentiation by Text and Question Type Necessary? **Journal of Educational Psychology**, 109(1), 70–83.
- Nation, I. S. (2001). **Learning Vocabulary in Another Language**. Cambridge: Cambridge University Press.
- Pem, K., & Sukavatee, P. (2022). The Effects of Extensive Reading on the Reading Fluency and Reading Comprehension of Primary Grade Students in a Bhutanese ESL Context. **An Online Journal of Education**, 17(1), 1-15.
- Pongsatornpiat, W. (2021). Interactive Group in Extensive Reading to Enhance Reading Ability of Thai Undergraduate Students. **LEARN Journal: Language Education and Acquisition Research Network**, 14(2), 342–371.
- Poulshock, J. (2010). Extensive graded reading in the liberal arts and sciences. **Reading in a Foreign Language**, 22(2), 304–322.
- Promluan, Y., & Sukying, A. (2021). The Impact of Extensive Reading on Thai Primary School Children's Vocabulary Knowledge. **Journal of Modern Learning Development**, 6(5), 209–223.
- Sakurai, N. (2017). The Relationship between the Amount of Extensive Reading and the Writing Performance. **The Reading Matrix: An International Online Journal**, 17(2), 142-164.
- Singum, R., & Chinwonno, A. (2021). Implementing EFL Extensive Reading for Thai Vocational Students. **LEARN Journal: Language Education and Acquisition Research Network**, 14(1), 208-239.
- Syamsuddin, M. R. (2021). The Role of Extensive Reading in Improving General English Proficiency. **Parahikma Journal of Education and Integrated Sciences**, 1(1), 25-32.

- Suk, N. (2017). The Effects of Extensive Reading on Reading Comprehension, Reading Rate, and Vocabulary Acquisition. **Reading Research Quarterly**, 52(1), 73–89.
- Wan-a-rom, U. (2010). Self-assessment of word knowledge with graded readers: A preliminary study. **Reading in a Foreign Language**, 22(2), 323–338.
- Wang, Y.-H. (2013). Incidental vocabulary learning through extensive reading: A case of lower-level EFL Taiwanese learners. **Journal of Asia TEFL**, 10(3), 59-80.
- Waring, R. (2023). Extensive reading. In E. Hinkel, **Handbook of practical second language teaching and learning** (pp. 384-394). New York: Routledge.
- Wisaijorn, P. (2017). Effects of Extensive Reading on Thai University Students. **Pasa Paritat Journal**, 32, 29-62.
- Zhou, J., & Day, R. R. (2020). The Incidental Learning of L2 Chinese Vocabulary through Reading. **Reading in a Foreign Language**, 32(2), 169-193.
- Zhou, J., & Day, R. R. (2021). Online Extensive Reading in EAP Courses. **Reading in a Foreign Language**, 33(1), 103-125.