

A Teaching Experiment to Upgrade English Reading Ability of the Low English Proficiency TNI Students by Using EFL Supplementary Reading Materials

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Abstract— The purposes of this research were 1) to develop and test the efficiency of EFL supplementary reading materials to upgrade reading ability of the low English proficient TNI students 2) to compare the students' English reading achievement before and after using EFL supplementary reading materials for the first year undergraduate students, Thai-Nichi Institute of Technology and 3) to find out the students' satisfaction towards the EFL supplementary reading materials in 8 units.

The subjects were 72 first year undergraduate students at the Thai-Nichi Institute of Technology, Bangkok, during their first academic year 2011. The experiment consisted of 8 units of EFL supplementary reading materials, the English reading achievement test, and a questionnaire for measuring the students' satisfaction with the effectiveness of the materials.

The experimental process and data collection were conducted as follows: The subjects were given a 30-item English reading achievement pretest followed by 8 units of EFL supplementary reading materials over 16 class sessions in 16 weeks. After the completion of each unit, the English reading formative test was administered to measure the subjects' English reading achievement and a questionnaire was used for surveying the subjects' satisfaction on their EFL supplementary reading materials.

The t-test was used to compare the subjects' English reading achievement before and after the class. The average of the eight English reading formative test scores was compared with the post-test scores in order to determine the efficiency of the instructional materials. The mean and standard deviation of the questionnaire scores were used to measure the students' satisfaction with the materials.

The results of the study were as follows:

1. The EFL supplementary reading materials were highly effective. Students scored 84.30 on the English reading formative tests and 84.53 on the post-test.
2. The students' English reading achievement after the EFL supplementary reading materials was significantly higher than before, with lessons constructed at 0.05 level.
3. The students were very satisfied with the eight English reading lessons.

Keywords— EFL Supplementary Reading Materials, Upgrading EFL Reading Ability

I. INTRODUCTION

Thai-Nichi Institute of Technology has been operated under the philosophy of “disseminating knowledge and building economic base”. One of the TNI objectives is to generate human resources who have abilities in technological advancement and industrial management. Moreover, TNI concept of program administration is to focus on the students' language skills- the students will be able to communicate in Japanese and English. In order to achieve in the TNI objectives, TNI has provided English courses for students from all faculties to enroll [1].

Reading plays a crucial role in our lives. It is so much a part of everyday living that one can hardly imagine life without it. Reading is also uniquely individual and flexible. In the age of the Internet and information revolution, reading retains its importance as an essential skill for learners of any language. For most of them, it is the most important skill to master in order to ensure success in learning [2].

Students at the university level need to understand textbooks, articles, or magazines written in English to acquire knowledge and gather information for both their careers and their academic studies [3]. For these reasons, the ability to read and understand English effectively is regarded as the most important skill for EFL students at all levels. Reading plays an important role in language learning, but EFL educators have found that most students cannot read English texts effectively [4]. The problems impeding students' reading success come from the inappropriateness of the reading materials, the misunderstanding of grammatical structures, difficulties with vocabulary, and the lack of background knowledge from the readers' part [4-6].

According to Aebersold and Field [4], in L2 reading, practice is important; to be precise, the more frequently the word is seen, the faster the lexical access and the shorter the recognition time. For L2 learner, the acquisition of a large mental lexicon involves exposure to a great deal of written text. The interactive models of reading attempt to combine the crucial insights of bottom-up and top-down models. Such reading models operate in both a top-down and a bottom-up fashion simultaneously. They are bidirectional in nature [7,8]. Interactive models can be divided into two types. The first

type is based on the interaction of componential cognitive processes of reading, while in the second the interaction focus is on the product of the interaction of readers' background knowledge (schema) with the text information in the process of comprehension [9-11].

Some researchers classify reading strategies according to the time they are used – before, during, or after reading. Others categorize these strategies as either global or local according to the part of the text on which they focus [12]. Aebersold and Field [4] maintain that while reading, people's minds constantly engage in different complex processes. They start by processing information at the sentence level by using bottom-up strategies. They focus on identification of a word's meaning and grammatical category, on sentence structure, on text details, and so forth. During this process, readers constantly check their own schemata to see if the new information fits using top-down strategies such as background knowledge and prediction [13, 14].

Teaching-learning English language of TNI students has problem in reading and they also lack of motivation in reading because instructional contents are not interesting. The contents are not suitable to apply in daily life of undergraduate students. Thus, instructional management must depend on learner's interesting and ability that make motivation in reading of the learners.

In conclusion, the researcher created EFL supplementary reading materials which passed checking from experts for study improvement in reading of first year undergraduate students in first semester of 2011 academic year and the results derived from research will be guideline in improvement and development instruction and instructional materials next occasions.

Research purposes

The purposes of this research were 1) to develop and test the efficiency of EFL supplementary reading materials to upgrade reading ability of the low English proficient TNI students 2) to compare the students' English reading achievement before and after using EFL supplementary reading materials for the first year undergraduate students, Thai-Nichi Institute of Technology and 3) to find out the students' satisfaction towards the EFL supplementary reading materials in 8 units.

II. RESEARCH METHOD

The data was gathered and analyzed as follows.

A. Population and sampling

1. The population was undergraduate students at Thai-Nichi Institute of Technology, Bangkok, in first semester of 2011 academic year. There were 900 students from 3 faculties which are Faculty of Business Administration, Faculty of Information Technology, and Faculty of Engineering.

2. The sample consisted of 72 students, and was derived from a simple random sampling technique.

B. Contents used in experiment

The topics consisted of *Creative Cooking*, *Super Commuters*, *The Man behind KFC*, *Favorite Movies*, *Kill Your TV*, *Living with the Enemy*, *Yosakoi (Japanese Dance)*, and *Loy Krathong Festival* which were chosen based on a survey of students' needs questionnaire.

C. Duration in experiment

The experiment ran for 16 weeks (1 hour per week)

D. Variables

Variables in this study were as follows:

1. The English reading ability of undergraduate TNI students before and after the class.
2. The satisfaction of undergraduate TNI students with EFL supplementary reading materials.

E. Research Instruments

1. Eight lessons of EFL supplementary reading materials.
2. A 1-hour English reading proficiency test (30 items: 30 scores).
3. A questionnaire constructed by the researcher assessing satisfaction with EFL supplementary reading materials.

F. Construction and Development of Research Instruments

The researcher constructed the EFL supplementary reading materials and the proficiency tests in the following way:

First, the researcher studied the objectives of EFL supplementary reading materials, and focused on English reading skills and strategies. Emphasis was placed on reading for main ideas, reading for topic sentences, reading for pronoun references, reading for facts and opinions, reading for sequencing events, reading for author's purposes, and reading for inference.

Second, the researcher derived eight topics from the survey of needs questionnaire and interviewed the participants regarding topics required for undergraduate TNI students. The topics were as follows:

Rank	Topic	Mean	S.D	Meaning
1	Creative Cooking	4.65	0.49	Strongly agree
2	Super Commuters	4.62	0.53	Strongly agree
3	The Man behind KFC	4.60	0.57	Strongly agree
4	Favorite Movies	4.55	0.60	Strongly agree
5	Kill your TV	4.51	0.53	Strongly agree
6	Living with the Enemy	4.50	0.68	Strongly agree
7	Yosakoi (Japanese Dance)	4.46	0.75	Agree
8	Loy Krathong Festival	4.39	0.93	Agree

Third, these eight topics were modified to suit undergraduate TNI students by giving the students vocabulary guidelines and meanings, simplifying structures of language, finding pictures, and applying the contents to English reading

instruction. Then, the table of contents specification was designed by determining the objectives, contents, topics, desired reading skills, reading activities, and evaluation.

Last, the constructed table was examined for IOC by experts and lesson plans were written for all 8 lessons. Each lesson plan was composed of learning objectives, topics and contents, and reading activities consisting of a pre-reading activity, a while-reading activity and a post-reading activity.

The pre-reading activity included presenting pictures and answering the questions in order to lead the students to lessons and matching vocabulary with pictures.

While-reading was categorized into 5 groups: True/False; Yes/No Question; Information gap; Matching; and Sequencing events.

Post-reading activities were divided into several types: semantic maps, information tables, and concept mapping.

The lesson test consisted of a multiple choice test, sequencing events, information gap, and question answering.

Proficiency test

Students were given pre- and post-class proficiency tests. The tests had the same format and consisted of 30 items (30 scores). The duration of each test was 60 minutes. The researcher used the textbook, journal articles and related research as an outline to create the test. The researcher also, created a table of specifications including reading skills and goals for each lesson, and then created one set of proficiency tests following this table of test specifications. The researcher derived the difficulty and discrimination of the tests (P-R value) from standard criteria consisting of 30 items. Five experts examined, corrected and improved the accuracy, validity and reliability of the language and contents of the test. The test had a difficulty level between 0.20-0.80 and a rank of discrimination at 0.20 or over. The calculation of the test reliability was used K-R 20 by Kuder-Richardson [15]. Then, the proficiency test was used to sampling of the research.

The Satisfaction Questionnaire

The researcher created a questionnaire to investigate student satisfaction with this type of EFL supplementary reading materials. The questionnaire was constructed using both closed-end and opened-end questions based on Best [16]. The answer to each question was separated into five rating scales as demonstrated by Likert. The rating scales in the questionnaire were

- 5 refers to strongly agree
- 4 refers to agree
- 3 refers to moderate
- 2 refers to disagree
- 1 refers to strongly disagree

There were four components of satisfaction which were content, instructional design, teaching-learning activities, instructor and evaluation. The data from the experts was applied with the following formula:

$$IOC = \frac{\sum R}{N}$$

IOC replaces Index of item-Objective Congruence

R replaces Experts' opinions

N replaces Number of experts

Questions rated less than 0.5 by the experts were considered and improved. The data obtained from a small group experiment was analyzed to find reliability by using α -Coefficient formula stated by Cronbach [17]. Coefficient of reliability was 0.90.

Data Collection

The program was first tested on a single student, and then on a small group of students, before being used on an actual class. Therefore, there were three phases of data collection:

Phase 1

One undergraduate TNI student who was not included in the test group went through the EFL supplementary reading materials, and took the 30-question pre- and post-tests. This enabled the researcher to investigate behaviour, listen to the student's point of view, answer questions, and troubleshoot problems with the 8 units and the proficiency tests.

The student scored 65 out of 80 on the 8 lesson tests, or 81.25%. On the post-test, the student scored 24 out of 30, or 80.00%. The effectiveness of EFL supplementary reading materials was 81.25/80.00. The highest score was on lesson 3 *The man behind KFC* (90%), and the lowest on lesson 6, *Living with the enemy* (70 %).

Phase 2

A small group of 9 students then took the EFL supplementary reading materials, with tests after each lesson, and took the post-test. In this phase, the researcher recorded the problems and suggestions in order to improve the effectiveness of the lessons. The scores derived from each lesson and scores from the ability posttest were calculated as 79.58/80.37. These nine students scored 573 out of 720 (79.58 %) on the lesson tests. On the post-test, the students scored 217 out of 270, or 80.37%. Hence, the effectiveness of the EFL supplementary reading materials was 79.58/80.37. The highest scores were from lesson 2 *Super Commuters* (83.33%) and lesson 7 *Yosakoi (Japanese Dance)* (83.33%), the lowest from lesson 3 *The man behind KFC* (77.77 %).

Phase 3

Next, 72 students took the reading course and the post-test. The scores derived from each lesson and scores from the posttest were calculated at **84.30/84.53**. Students scored 4,856 out of 5,760 (84.30 %) on the lesson tests. On the posttest, the students scored 1,826 out of 2,160, 84.53%, with an improvement of .75%. The highest scores were from lesson 8 *Loy Krathong Festival* (86.38%), the lowest from lesson 1 *Creative Cooking* (80.69 %).

Statistic Used in Data Analysis

1. The lesson effectiveness was determined by using E1/E2 formula followed 75/75 criteria.
2. The comparison between the pretest and posttest was done using t-test, which was calculated by SPSS/PC for Windows XP.
3. The F-test was used to measure the students' English reading achievement on pre-reading and post-reading according to students' majors.
4. The data from the questionnaire were rated to find the mean and standard deviation and then translated based on criteria developed by Best (1981) as follows:

- 1.00 $\leq \bar{x}$ < 1.50 indicates the lowest satisfaction
- 1.50 $\leq \bar{x}$ < 2.50 indicates low satisfaction
- 2.50 $\leq \bar{x}$ < 3.50 indicates moderate satisfaction
- 3.50 $\leq \bar{x}$ < 4.50 indicates high satisfaction
- 4.50 $\leq \bar{x}$ \leq 5.00 indicates the highest satisfaction

III. RESULTS

Phase 1: Tests were given to all 72 students after each of the eight units. The statistics used in the data analysis consisted of mean (\bar{x}), standard deviation (S.D), percentage and rank order of scores in each unit. The lesson tests got a mean score over 75% for each unit. The highest scores were from lesson 8 *Loy Krathong Festival* (86.38%), the lowest from lesson 1 *Creative Cooking* (80.69 %).

Phase 2: The comparison of the before and after tests for the 72 students were as follows:

Test	Number of Sample	Total score	(\bar{x})	S.D	(\bar{D})	S.D. (D)	t	Sig
Pretest	72	30	8.97	3.79	16.39	0.57	20.047	0.000*
Posttest	72	30	25.36	3.22			66.810	

* Statistical significance at 0.05 level

The post-test scores were higher than the pretest scores by 0.05 (Sig = 0.000 < 0.05). The mean score of the posttest was 25.36, higher than the pretest (8.97 out of 30). The difference between the pre-test and post-test scores was 16.39, and for the t-test it was 66.810. Results indicated that students reading ability was improved by the course, affirming hypothesis 2.

Phase 3: The results of the student satisfaction questionnaire were as follows:

The mean scores of all eight units was 4.48 (S.D. = 0.68). The highest mean score was on unit 2 (\bar{x} = 4.53, S.D = 0.72). The second highest mean score was on unit 1 (\bar{x} = 4.49, S.D= 0.66). The lowest mean score was on unit 6 (\bar{x} = 4.43, S.D.= 0.64). The overall mean score of eight units was 4.48 (S.D. = 0.68). The results indicate high student satisfaction with the EFL supplementary reading materials, affirming hypothesis 3.

IV. DISCUSSION

The results of the study indicate:

1. The efficiency of the EFL supplementary reading materials was higher than the determined criteria. This may be on account of following:

1.1 The EFL supplementary reading materials used specific English contents which the TNI students were able to analyze critically, and students had the background knowledge to understand the contents. This is advocated by Carrell [10] who stated that background knowledge has played an important role in reading comprehension development for a long time. The effectiveness of background knowledge in improving reading comprehension indicates the constructive nature of comprehension, and the critical role of the reader's prior knowledge in that construction. In addition, the TNI students were already familiar with the contents of reading passages because they had background knowledge about it which would make it easier to understand [18-20].

1.2 The teaching-learning activity in each unit was constructed according to an English reading theory developed by Williams [21], and Harris, Albert, and Sipay [22]. They started learners with easy activities, progressing to more difficult activities for pre-reading, and asking question in while-reading activities to check the students' understanding. In the post-reading stage, the researcher created semantic maps and information charts to help the learners fill in information in the correct way. Furthermore, the learners used reading strategies to assist in reading comprehension [12, 4, 23, 14].

1.3 The course was designed in accordance with experts' views on objective learning, pre-reading, while-reading, and post-reading activities. The contents fell in the category of specific English. The learners were able to use a reading strategy in learning because comprehending textual discourse structures is an important aspect of a reader's overall reading abilities [24, 25].

2. The students' reading ability improved at the 0.05 level. This may be accounted for by the learners' satisfaction with, and interest in the required contents. The course integrated teaching English reading with strategies, semantic maps, and charts which were familiar to TNI students [4, 13, 14, 25].

3. Survey results indicated students were highly satisfied with the course. This seemed to be because they understood and applied reading strategies. Results also confirmed statements of the educational theorist, Honefeld [26], who reported that skilled readers tend to keep the meaning of the passage in mind, read in broad phrases, skip words, and read with confidence. Moreover, positive thinking created more proficient readers to use a greater variety and often a greater number of reading strategies [27, 28, 29, 2, 5].

V. CONCLUSION

According to the study and data analysis, the results of this study were as follows.

1. The efficiency of the EFL supplementary reading materials for undergraduate TNI students in this experiment was **84.30/84.53** which was higher than determined criteria (75/75). It was demonstrated that the EFL supplementary reading materials for this group of L2 learners was very effective, confirming hypothesis 1.

2. Ability in English reading after learning by this method of instruction was improved at statistical significance at 0.05 level, confirming hypothesis 2.

3. These L2 learners indicated high satisfaction with the EFL supplementary reading materials, confirming hypothesis 3.

RECOMMENDATIONS

1. For classroom research, EFL supplementary reading materials should be created in English reading instruction through CALL.
2. For further research, the researcher should study about comparison Computer Assisted Language Learning (CALL) and learning by instructor's teaching.

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REFERENCES

- [1] Thai-Nichi Institute of Technology (2011). *TNI student handbook*, Bangkok.
- [2] Alderson, J. C. (1984). Reading in a foreign language: A reading problem or a language problem? In J.C. Alderson & A.H. Urquhart (Eds.), *Reading in a foreign language* (pp.1-27). New York: Longman.
- [3] Wei, Y. (2005). The relationship between phonological awareness and reading ability of Thai students in English and Thai primary schools of Thailand. *Curriculum & Instruction Theses and Dissertations UM Theses and Dissertations*. (UMI No. 3175161).
- [4] Aebersold, J. A., & Field, M L. (1997). *From reader to reading teacher*. Cambridge: Cambridge University Press.
- [5] Krashen, Stephen D. (1987). "Theoretical Research and Second Language Acquisition Theory." In *Methodology in TESOL*: A Book of Readings 8 – 15. New York : Newbury House Publishers.
- [6] Nuttall, C. (2000). *Teaching Reading Skills in a Foreign Language*. Oxford: MacMillan Heinemann.
- [7] Rumelhart, D. (1977). Toward an interactive model of reading. In S. Dornic (Ed.), *Attention and Performance VI* (pp.573-603). Hillsdale: Erlbaum.
- [8] Campbell, P., & Malicky, G. (2002). The reading strategies of adult basic education students. *Adult Basic Education*, 12, 3-19.
- [9] Stanovich, K., & Stanovich, P. (1995). How research might inform the debate about early reading acquisition. *Journal of Research in Reading*, 16, 81-97.
- [10] Carrell, P. (1983). Three components of background knowledge in reading comprehension. *Language Learning*, 33,183-205.
- [11] Grabe, W. (1991). Current developments in second language reading research. *TESOL Quarterly*, 25, 375-406.
- [12] Young, D., & Oxford, R. (1997). A gender-related analysis of strategies used to process input in the native language and foreign language. *Applied Language Learning*, 8, 43-73.
- [13] Barnett, M. (1988). *More than meets the eye: Foreign language reading: Theory and practice*. Tappan, NJ: Language in Education. (ERIC Document Reproduction Service No. ED305829).
- [14] Carrell, P. (1989). Metacognitive awareness and second language reading. *Modern Language Journal*, 73, 121-13.
- [15] Boonriang Khajonsil. (2000). *Educational Research Methodology*. Fifth Edition. Bangkok: P.N. Publishing.
- [16] Best, Johnson W. (1981). *Research in Education*. 5th ed. New Jersey: Prentice-Hall Inc.
- [17] Cronbach, Lee Joseph. (1974). *The Dependability of Behavioral Measurement Theory of Generalizability for Scores and Profile*. New York: Wiley Press.
- [18] Goodman, K., (1994). Reading, Writing, and Written Texts: A Transactional Sociolinguistic View. In R.B. Ruddell, M.R. Ruddell, & H. Singer (eds.), *Theoretical models and processes of reading*. Newark, DE: International Reading Association.
- [19] Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach*. Cambridge: Cambridge University Press.
- [20] Sadoski, M., Paivio, A., & Goetz, E. (1991). Commentary: A critique of schema theory in Reading and Dual Coding Alternative. *Reading Research Quarterly*, 26(4), pp. 463-484.
- [21] Williams, Eddie. (1994). *Reading in the Language Classroom*. 8th ed. London: Macmillan Publisher Ltd.
- [22] Harris, Albert J., and Edward R. Sipay. (1979). *How to teach Reading*. New York: Longman Inc.
- [23] Grabe, W. (2003). Using discourse patterns to improve reading comprehension. *JALT2002 at Shizuoka Conference Proceedings*. Tokyo: Japan Association for Language Teaching.
- [24] Trabasso, T., & Bouchard, E. (2002). Teaching Readers How to Comprehend Text Strategically. *Comprehension Instruction: Research-based Best Practices*, pp. 176-200.
- [25] Grabe, W. (2004). Research on teaching reading. *Annual Review of Applied Linguistics*, 24, pp.44- 69.
- [26] Honsefeld, C. (1977). A preliminary investigation of the reading strategies of successful and non-successful second language learners. *System*, 5, 110-123.
- [27] Anderson, N.J. (2002). The role of metacongition in second language teaching and learning. *ERIC Digest*, April, 2002, 3-4.
- [28] Green, J. M. & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency and gender. *TESOL Quarterly*, 29, 2, 261-297.
- [29] O'Malley, M. & Chamot, A. (1990). *Learning strategies in second language acquisition*. New York: Cambridge University Press.