

Efficiency of Speed Reading and English Reading Comprehension of Undergraduate Students in Thailand

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Abstract-The purposes of this research were 1) to study speed reading efficiency of undergraduate students in Thailand, 2) to compare reading ability of undergraduate students before and after the class, 3) to compare reading ability of experimental group and control group according before and after the class, and 4) to study satisfaction with the method of speed reading of the undergraduate students

Research samples were 35 undergraduate students in higher education level derived through simple random sampling technique. The instruments used for gathering the data were speed reading materials, a reading test, and a satisfaction questionnaire. Statistics used for analyzing the data were frequency, percentage, mean, standard deviation, t-test, and content analysis.

Research findings were as follows:

1. The reading efficiency of undergraduate students was at a moderate level.
2. The scores of reading ability of undergraduate students after the class were higher than before the class with statistically significance at 0.05 level.
3. The scores of reading ability of experimental group students were higher than control group students with statistically significance at 0.05 level.
4. The students' satisfaction towards the speed reading technique was highly positive.

Keywords-Include at least 5 keywords or phrases

Introduction

Reading fluency has a long history in first language acquisition, but has only become an area of research interest in second language learning in the last few decades. Recent studies in English as a foreign language (EFL) reading fluency have looked at methods to increase reading speed and ways to assess reading fluency. Yet questions have been raised about the optimal results of speed improvement and whether reading instructors should encourage learners to try to improve their reading rates, as an increase in reading rate may result in a decrease in reading comprehension [1].

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 culture and to using in daily life of TNI students. Wanida Duanglit [2] advocated that problem in teaching reading was instructional contents because difficulty of content and it was not suitable to recent situation and the

learners were not interested and did not understand culture of language. Thus, instructional management must depend on learner's interesting and ability that make motivation in reading of the learner. Moreover, reading techniques play a crucial role in learning reading speed of the learners. Brown [3] advocated that the two most valuable reading strategies for learners as well as native speakers are skimming and scanning.

In conclusion, the researcher studied speed reading efficiency of undergraduate students and compared reading ability of undergraduate students before and after the class. Furthermore, satisfaction with the method of speed reading of the undergraduate students was investigated in this study in second semester of 2014 academic year and the results derived from research will be guideline in improvement and development instruction and instructional techniques next occasions.

Research Objectives

1. To study speed reading efficiency of undergraduate students in Thailand
2. To compare reading ability of undergraduate students before and after the class
3. To study satisfaction with the method of speed reading of the undergraduate students

Scope of Research

Population and Samples

1.1 The population is first year undergraduate students at Thai-Nichi Institute of Technology in second semester of 2014 academic year. There were 700 students from all faculties.

1.2 The samples consisted of 30 students who enrolled in English for Communication2 course (ENL-102) in second semester of 2014 academic year, and were derived from a simple random sampling technique.

Duration in Experiment

The experiment ran for 16 weeks in second semester of 2014 academic year.

Variables

Variables in this study were as follows:

1. The English reading ability of undergraduate students before and after the class.

- The satisfaction of undergraduate students towards speed reading approach

Contents used in this experiment

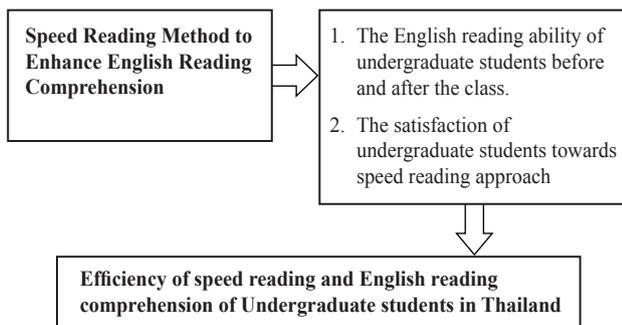
Contents used in this experiment consisted of 6 topics which derived through students’ needs as follows:

- The Island of Britain (590 words)
- Existentialism (528 words)
- A Dystopian Society (455 words)
- Synonyms of English Words (882 words)
- The Role of Computers in School (438 words)
- The Interstate Highway System in USA (600 words)

Research Instruments

- Six speed reading materials for the undergraduate students in Thailand
- An English reading ability test to measure the reading ability of the subjects before and after the class (30 items: 30 scores). The duration of the test was 1 hour.
- Questionnaires constructed by researcher to measure a satisfaction of undergraduate students towards speed reading approach

Conceptual Framework



Research Hypothesis

- English speed reading ability of undergraduate students was at high level.
- The students’ speed reading achievement after the class was significantly higher than before, with instruction constructed at 0.05 level.
- The experimental group’s speed reading ability was significantly higher than controlled group’s speed reading ability at 0.05 level.
- The students’ satisfaction towards speed reading learning activities was at high level

Research Design

This study was to experiment efficiency of speed reading and English reading comprehension of undergraduate students in Thailand. It was quantitative research which had the steps of research processing as follows.

The researcher derived six topics from the survey of needs questionnaire and interviews the participants about required topics from undergraduate students. The topics were demonstrated as follows:

Table 1: table of needs in required topics of TNI students

Rank	Topic	Mean	S.D	Meaning
1	The Island of Britain (590 words)	4.59	0.58	highest needs
2	Existentialism (528 words)	4.53	0.69	highest needs
3	A Dystopian Society (455 words)	4.45	0.78	high needs
4	Synonyms of English Words (882 words)	4.41	0.88	high needs
5	The Role of Computers in School (438 words)	4.38	0.72	high needs
6	The Interstate Highway System in USA (600 words)	4.33	0.91	high needs

According the table, it was demonstrated that the undergraduate students need required topics at the highest level on the topic of *the Island of Britain (590 words)* and *Existentialism (528 words)*. For the rest topic, it was at high level.

Proficiency test

Proficiency test was used before and after the speed reading class. The test was the same set which consisted of 30 items (30 scores). Time duration for the test was 60 minutes. The researcher determined the approach of the test as 1) to study the way of constructing proficiency test based on textbook, journal and related research as an outline to create the test, 2) to create table of test specification included the contents of reading skills to achieve the goals in each lesson, 3) to create one set of proficiency test in English reading followed the table of test specification. The researcher selected difficulty and discrimination of test (P-R value) derived from standard criteria which consisted of 30 items. Five experts examined corrected and improved accuracy, validity and reliability of language and contents of the test, 4) to select the test that had the difficulty between 0.20-0.80 and rank of discrimination at 0.20 or over. The calculation of the test reliability was used K-R 20 by Kuder-Richardson [4]. Then, proficiency test was used to sampling of the research.

The Satisfaction Questionnaire

The researcher created satisfaction questionnaire in order to investigate satisfaction towards speed reading approach from sampling students as 1) to study the outline of constructing questionnaire both closed-end and opened-end based on Best [5].

The questionnaire was separated into five rating scales as demonstrated by Likert [6]. The rating scales in 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 towards speed reading approach which were content, instructional process, teaching-learning activities and instructor. The data from the experts was applied with formula as follows.

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

IOC replaces Index of item-Objective Congruence
R replaces Experts' opinions
N replaces Number of experts

01.00 - 3.00 per 500 words means very high
3.01 - 5.00 per 500 words means high
5.01 - 7.00 per 500 words means moderate
7.01 - 9.00 per 500 words means low
9.01 - 11.00 per 500 words means very low

The result of the scores under 0.5 from the experts had to be considered and improved. The data obtained from small group experiment was analyzed to find reliability by using α -Coefficient formula stated by Cronbach ([7]. Coefficient of reliability was 0.92.

Statistic Used in Data Analysis

1. Analysis to find out speed reading efficiency by using mean, and standard deviation.
2. Comparison the ability in English speed reading of sampling students between pretest and posttest by using t-test which was conveyed by computer program.
3. Comparison the ability in English speed reading of experimental group and controlled group by using t-test which was conveyed by computer program.
4. Data analysis from questionnaire both single item and whole questionnaire which presented a form of rating scale. These rating scales were calculated to find out mean and standard deviation and then translated based on criteria developed by Best [8] as follows.
 $1.00 \leq \bar{x} < 1.50$ refers students had the lowest satisfaction
 $1.50 \leq \bar{x} < 2.50$ refers students had low satisfaction
 $2.50 \leq \bar{x} < 3.50$ refers students had moderate satisfaction
 $3.50 \leq \bar{x} < 4.50$ refers students had high satisfaction
 $4.50 \leq \bar{x} < 5.00$ refers students had the highest satisfaction

Data Collection

There were three phases of the data collection process on speed reading approach for the undergraduate students at Thai-Nichi Institute of Technology, Bangkok.

Phase 1

To apply with 35 undergraduate students who were experimental group in second semester, 2014 academic year. The student had to study speed reading approach and did the 30 multiple choice test items after that. The 6 topics of speed reading were experimented. In this phase, the students had to do ability posttest which was the same set of ability pretest. The time duration was 60 minutes. The researcher, then, analyzed the scores to find out the level of samples' speed reading. The effectiveness of speed reading was presented as following table.

Table 2: Table of scores from 6 topics of speed reading and pretest-posttest scores in 35 students who were an experimental group

The assessment of speed reading ability of experimental group at TNI, the researcher used English reading ability test which created according to test procedure. Therefore, mean scores of speed reading were calculated from criteria as following; (adapted from [9],[10])

No.	1 st	2 nd	3 rd	4 th	5 th	6 th	Pre	Post
Speed/min	X	X	X	X	X	X	30	30
1	4.32	4.82	4.85	5.36	5.20	5.23	11	18
2	4.47	4.98	4.85	6.32	5.38	5.22	14	20
3	4.55	5.78	4.95	5.94	5.69	5.29	17	28
4	4.71	5.62	4.84	5.99	5.87	5.39	13	24
5	4.69	4.89	4.93	5.78	5.69	5.27	11	20
6	4.84	4.93	4.85	5.55	5.55	5.77	8	27
7	4.58	5.28	4.79	5.69	5.69	5.78	7	21
8	4.99	5.68	4.82	6.39	5.32	5.91	7	17
9	4.89	5.69	4.98	6.74	5.91	5.37	4	16
10	4.71	5.32	4.99	6.52	5.77	5.39	5	18
11	4.65	5.77	4.79	6.08	5.28	5.27	8	22
12	4.58	4.95	4.58	6.37	5.22	5.39	11	26
13	4.65	4.87	4.67	6.07	5.67	5.28	12	28
14	4.85	4.89	4.75	6.07	5.55	5.31	10	21
15	4.76	4.87	4.69	6.30	5.39	5.71	18	29
16	4.99	4.98	4.85	6.04	5.74	5.46	14	22
17	5.04	5.88	4.79	5.39	5.89	5.31	13	28
18	4.87	5.78	5.28	5.47	5.67	5.27	14	27
19	4.67	5.47	5.36	5.69	5.96	5.39	15	26
20	4.88	5.61	5.07	6.07	5.37	5.27	13	22
21	5.68	4.74	5.29	6.39	5.47	5.31	15	27
22	4.89	4.92	5.27	6.27	5.28	5.22	17	29
23	5.68	4.78	5.28	6.77	5.39	5.19	16	23
24	4.78	4.85	5.37	6.29	5.64	5.17	12	27
25	4.85	5.01	5.27	6.37	5.37	5.31	13	25
26	4.69	5.31	5.17	6.82	5.31	5.19	17	23
27	4.78	5.28	5.22	6.47	5.32	5.29	15	24
28	4.89	4.85	4.67	6.89	5.52	5.21	11	26
29	4.79	4.67	4.71	6.31	5.17	5.28	12	27
30	4.69	4.67	4.55	6.07	5.39	5.41	10	28
31	4.87	4.28	4.99	5.94	5.29	5.55	7	25
32	4.96	4.67	4.89	5.67	5.37	5.67	5	22
33	4.87	5.01	4.67	5.91	5.39	5.74	11	23
34	4.78	5.31	4.85	6.39	5.22	5.29	13	27
35	4.98	5.09	4.67	6.77	5.39	5.57	16	30
Total	4.80	5.12	4.93	6.14	5.49	5.39	11.85	24.17
Total of All	5.31							

The table showed that the average of reading speed of the samples on overall was at moderate level. When considered in each lesson, it was found that 1st, 3rd lesson was at high level. For the rest lesson, it was at moderate level.

The table of score comparison between pretest and posttest of experimental group, standard deviation, difference and t-test of the 35 samplings

Test	N	Total score	(\bar{x})	S.D	t	Sig
Pretest	35	30	11.85	3.71	38.422*	0.000
Posttest	35	30	24.17	3.72		

* Statistical significance at 0.05 level

This table highlighted that the posttest scores were higher than pretest scores at statistical significance at 0.05 level (Sig = 0.000 < 0.05). The mean score of posttest equaled to 24.17 which was higher than pretest score (11.85 out of 30).

Table 2: Table of pretest-posttest scores in 35 students who were a controlled group

No.	Pretest	Posttest
	30	30
1	11	16
2	10	11
3	8	10
4	13	12
5	11	12
6	15	14
7	14	16
8	12	12
9	10	13
10	13	13
11	14	13
12	13	15
13	12	13
14	11	14
15	13	11
16	14	14
17	10	15
18	12	11
19	13	12
20	8	13
21	8	11
22	11	12
23	13	13
24	9	11
25	10	8
26	5	8
27	11	13
28	13	11
29	17	19
30	12	14
31	13	12
32	14	14
33	15	16
34	15	13
35	11	11
total	11.82	12.74

The table of score comparison between pretest and posttest of controlled group, standard deviation, difference and t-test of the 35 samplings

Test	N	Total score	(\bar{x})	S.D	t	Sig
Pretest	35	30	11.82	2.44	34.048*	0.000
Posttest	35	30	12.74	2.21		

* Statistical significance at 0.05 level

This table highlighted that the posttest scores were higher than pretest scores at statistical significance at 0.05 level (Sig = 0.000 < 0.05). The mean score of posttest equaled to 12.74 which was higher than pretest score (11.82 out of 30).

Phase 2: Comparison speed reading ability of experimental group and controlled group

The table of score comparison speed reading ability between experimental group and controlled group, standard deviation, difference and t-test of the 35 samplings

Test	N	Total score	(\bar{x})	S.D	t	Sig
Experimental group	35	30	24.17	3.72	38.422*	0.000
Controlled group	35	30	12.74	2.21		

* Statistical significance at 0.05 level

This table illustrated that the posttest scores of experimental group were higher than posttest scores of controlled group at statistical significance at 0.05 level (Sig = 0.000 < 0.05). The mean score of experimental group's posttest equaled to 24.17 which was higher than controlled group's posttest pretest score (12.74 out of 30). The t-test was 24.731. It indicated that the ability in speed reading approach was more effective than before learning and the experimental group's speed reading ability was higher than controlled group's speed reading ability which followed hypothesis 3

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

No.	Mean	S.D.	Meaning
1. Content	4.56	0.74	highest
2. Teaching Materials	4.49	0.68	high
3. Instructor	4.65	0.81	highest
4. Teaching- learning activity	4.52	0.77	highest
Total	4.55	0.75	highest

According to the table, it was demonstrated that the students' satisfaction towards speed reading instruction was at the highest level on the overall. When considered in each aspect, it was found that content, instructor, and

teaching-learning activity were at the highest level. For the rest aspect, it was at high level. The results indicate high student satisfaction with the course, affirming hypothesis.

CONCLUSIONS

1. The reading efficiency of undergraduate students was at a moderate level.

2. The scores of reading ability of undergraduate students after the class were higher than before the class with statistically significance at 0.05 level.

3. The scores of reading ability of experimental group students were higher than control group students with statistically significance at 0.05 level.

4. The students' satisfaction towards the speed reading technique was highly positive.

DISCUSSION

According to the study and data analysis, the results of this study could be discussed as follows.

1. The result of hypothesis 1 presented the efficiency of speed reading ability of the samples was at moderate level. In this way, it might concern with reasons as follows.

1.1 The contents of speed reading lessons based on general knowledge which some passages the learners had background knowledge to understand the contents. This is moreover, TNI students had background knowledge about it which might cause them to be easy to understand [11].

1.2 The teaching-learning activity constructed from the view of Williams [12] who anticipated that teaching-learning activity consisted of opening the chance of the learners to study from easy activity to difficult activity.

2. The scores of reading ability of undergraduate students after the class were higher than before the class with statistically significance at 0.05 level. In this way, it might be because TNI students used speed reading strategies which consisted of skimming and scanning and related to the concept of Mary and Mark [13] who advocated that the strategies skimming and scanning are well-known and help students to improve their speed. It involves a through overview of a text and implies a reading competence. Scanning is more a limited activity, only retrieving information relevant to a purpose.

3. The scores of reading ability of experimental group students were higher than control group students with statistically significance at 0.05 level. In this way, it might be because experimental group students had accuracy and frequency in speed reading skill and ability in decoding words which related to the idea of Rasinski and Johnson [14] who illustrated that reading accuracy is reading or decoding words correctly. Reading accuracy and reading rate go hand in hand. When students become more accurate in reading words, they will read them more rapidly and their reading rate will increase. On the other hand, those readers who must laboriously decode many words as they read can lose the meaning in the text.

4. The students' satisfaction towards the speed reading technique was highly positive. In this way, it might be because speed reading approach assisted the learners to practice their ability about reading fluency which focused on the meaning of text rather than on decoding words [15].

ACKNOWLEDGMENT

This research is supported by College of General Education and Languages, Thai-Nichi Institute of Technology, Bangkok, Thailand.

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