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 that 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: *Speed Reading Technique, English Reading Comprehension*

ผู้วิจัย บัณฑิต อนุญาหงษ์
หัวข้อวิจัย ประสิทธิภาพของการอ่านเร็วและความเข้าใจการอ่านภาษาอังกฤษของนักศึกษาระดับอุดมศึกษาในประเทศไทย
สาขา ภาษาอังกฤษ
มหาวิทยาลัย สำนักวิชาพื้นฐานและภาษา สถาบันเทคโนโลยีไทย-ญี่ปุ่น
ปีการศึกษา 2557

บทคัดย่อ

วัตถุประสงค์ของการวิจัย 1) เพื่อศึกษาประสิทธิภาพการอ่านเร็วของนักศึกษาระดับอุดมศึกษาในประเทศไทย 2) เพื่อเปรียบเทียบความสามารถการอ่านของนักศึกษาระดับอุดมศึกษาก่อนและหลังเรียน 3) เพื่อเปรียบเทียบความสามารถการอ่านของนักศึกษากลุ่มทดลองและกลุ่มควบคุมก่อนและหลังเรียน และ 4) เพื่อศึกษาความพึงพอใจของนักศึกษาที่มีต่อวิธีการสอนด้วยการอ่านเร็ว

กลุ่มตัวอย่าง ได้แก่นักศึกษาจำนวน 35 คน ในระดับอุดมศึกษาที่ได้มาจากการสุ่มอย่างง่าย เตรื่องมือที่ใช้ในการวิจัยประกอบด้วย สื่อเอกสารการสอนอ่านเร็ว แบบทดสอบการอ่าน และแบบสอบถามความพึงพอใจ สถิติที่ใช้ในการวิจัย ได้แก่ ค่าความถี่ ค่าร้อยละ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน ค่าคะแนนที (t-test) และการวิเคราะห์เนื้อหา

ผลของการวิจัยพบว่า 1) ประสิทธิภาพการอ่านของนักศึกษาระดับอุดมศึกษาอยู่ระดับปานกลาง 2) คะแนนความสามารถการอ่านของนักศึกษาระดับอุดมศึกษาหลังเรียนสูงกว่าก่อนเรียนอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 3) คะแนนความสามารถการอ่านของนักศึกษากลุ่มทดลองสูงกว่านักศึกษากลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 และ 4) ความพึงพอใจของนักศึกษาระดับอุดมศึกษาที่มีต่อวิธีการสอนอ่านเร็วอยู่ในระดับดี

คำสำคัญ: *เทคนิคการอ่านเร็ว, ความเข้าใจการอ่านภาษาอังกฤษ*

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Bundit Anuyahong

16 May 2015

Dedicated

To

my parents

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Chapter 1

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 (Carver, 1992).

While reading speed is generally thought to be associated with reading comprehension and past research has given insight into the relationship between these aspects, there has still been much controversy on this issue. A strong relationship between reading rate and comprehension in L1 reading has been reported in previous studies (Bowey, 2005; Perfetti, Landi, & Oakhill, 2005). Specifically, Levy, Abello and Kysynchuk (1997) found that poor readers benefit from rapid decoding training and suggested that, in L1 children's oral reading, speed increases facilitate comprehension (Nicholson & Tan, 1999). However, other researchers have demonstrated a weak relationship between fluency skills and reading comprehension level (Bell, 2001).

The link between comprehension and speed in second/foreign language (L2/FL) reading has not been clearly portrayed. Past research found that speed and comprehension are not competing components in L2 performance, and that the two factors have a supporting relationship in that speed promotes accuracy in comprehension and accuracy is one of the indicators of fluency development (Alessi & Dwyer, 2008). In Chang's (2010) study, a reading activity was integrated into the usual program for 13 weeks to improve 84 college students' reading rates. Results indicated that the participants increased their reading speed by 25% and their comprehension level increased by 4%. This low increase is probably due to a ceiling effect in the measurement, but it shows that speed increase does not result in a drop in comprehension.

Since a consensus on the association between speed and comprehension in both first language (L1) and L2/FL reading has not been established, it would be helpful to put some effort into investigating the relationship between speed and comprehension in L2/FL reading by looking at the comprehension scores on other types of reading to determine if reading speed improvement facilitates comprehension.

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 (2001:2-3) 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 (1994) 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 compare speed reading ability between experimental group and controlled group after the class
4. to study satisfaction with the method of speed reading of the undergraduate students

Scope of Research

Population and Samplings

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 samplings consisted of 35 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.

2. 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:

1. The Island of Britain (590 words)
2. Existentialism (528 words)
3. A Dystopian Society (455 words)
4. Synonyms of English Words (882 words)

5. The Role of Computers in School (438 words)

6. The Interstate Highway System in USA (600 words)

Definition of Terms

For this study the following terns were defined:

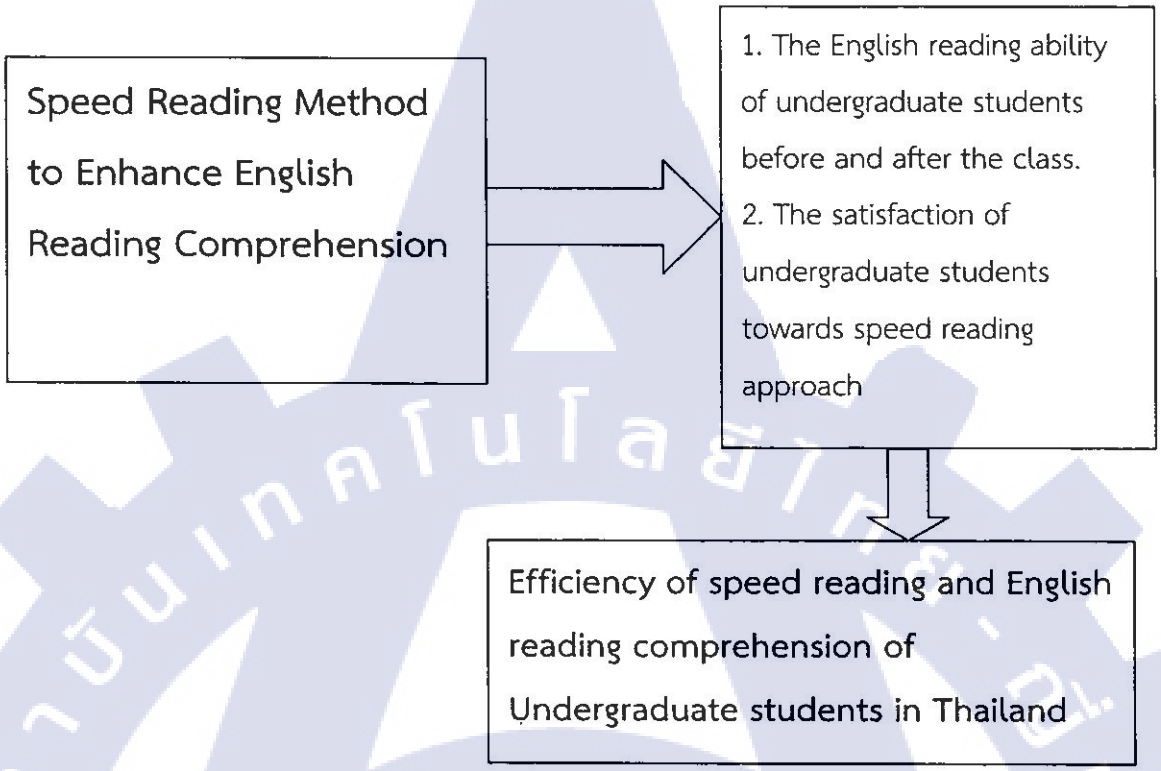
1. Efficiency of Speed Reading- Efficiency of reading which derived from speed reading activities in research experiment in second semester of 2014 academic year at Thai-Nichi Institute of Technology

2. Speed Reading Activities- Reading activities consisted of 6 topics namely; 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), and The Interstate Highway System in USA (600 words) which were experimented in second semester of 2014 academic year with undergraduate students: a case of Thai-Nichi Institute of Technology

3. English Reading Comprehension- Comprehension in reading English of the students which was assessed from ability in learning English by using speed reading technique before and after speed reading course.

4. Undergraduate Students- Thai-Nichi Institute of Technology students in second semester of 2014 academic year.

Conceptual Framework



Research Hypothesis

1. English speed reading ability of undergraduate students was at high level.

2. The students' speed reading achievement after the class was significantly higher than before, with instruction constructed at 0.05 level.

3. The students' speed reading achievement after the class of experimental group was significantly higher than controlled group, with instruction constructed at 0.05 level.

4. The students' satisfaction towards speed reading learning activities was at high level

Chapter 2

Literature Review

Introduction

In this chapter consisted of the nature of speed reading strategies, reading strategies, fluent reading process, methods of improving reading rates, and related research as following;

1. The Nature of Speed Reading Strategies
2. Reading Strategies
3. Fluent Reading Process – Theory
4. Components of Fluency
5. Reading Rate
6. Reading Accuracy
7. Assessing Reading Fluency
8. Repeated Reading
9. Methods of Improving Reading Rates
10. Timed Reading Activities
11. The Effects of Timed Reading in L1
12. The Effect of Timed Reading in L2
13. The Theories of Speed
14. Comprehension
15. Related Researches

1. The Nature of Speed Reading Strategies

A lot of writers defined reading as the getting of meaning which the writer means from his or her writing. Farstrup (2002) defined reading as getting the meaning from a certain structure to letters. Goodman (1970) and Nuttal (1982) agreed as it is an interaction operation. The present researchers agreed with Goodman's definition as reading is an interaction operation that the reader forms expectations about the content he is reading as after that to choose the most practical signs that help to get the meaning.

2. Reading Strategies

Beale (2013: 1) suggested ideas about speed reading strategies as people who know how to skim and scan are flexible readers. They read according to their purpose and get information they need quickly without wasting time. They do not need everything which increases their reading speed. Their skill lies in knowing what specific information to read and which method to read.

The strategies skimming and scanning are well-known and help students to improve their speed. Macleod (2013) wrote that skimming 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. Brown (1994: 283) suggested that the two most valuable reading strategies for learners as well as native speakers are skimming and scanning. Pugh (1978) suggested that since scanning is a less complex

style of reading it can be introduced first. Skimming requires greater fluency and more practice is required, so it should be introduced later.

Skimming, on the other hand, is reading a text or a passage quickly to get a general idea. Learners do not need to read every word when skimming, so teachers set this as a timed task and to encourage speed. It can be through looking at the title, introduction, and any diagram and sub-titles. Skimming is useful in three different situations. In the pre-reading, reviewing and in the reading process. Different literary methodologists agreed about steps which can be followed in skimming.

1) Read the title

2) Read the introduction or the first paragraph

3) Read the first sentence of every other paragraph

4) Read any headings and sub-headings

5) Notice any pictures, charts, or graphs

6) Notice any italicized or bold face word or phrases

7) Read the summary or last paragraph. (Brown, 1994: 283)

Macleod (2013) advocated that scanning is to cover a great deal of material rapidly to locate a specific facet or piece of information. It is useful to find specific name, date, statistic, or fact without reading the whole text. In the same website which was mentioned about skimming, suggested steps to follow in scanning.

1) To keep in mind at all times what are you searching for? If you hold the image of the word or idea clearly in mind, it is likely to appear more clearly than the surrounding words.

2) To anticipate in what form the information is likely to appear, numbers, proper nouns, etc.

3) To analyze the organization of the content before starting to scan.

- If material is familiar, the learner may be able to scan the entire text in a single search.

- If the material is difficult or too long, a preliminary skimming may be necessary to determine which part of the article to scan.

4) Let your eyes run rapidly over several lines of print at a time.

5) When you find the sentence that you seeks, read the entire sentence completely.

Skimming and scanning help in improving the students' speed and help in improving their abilities of comprehension.

Smith (2004) and Bowey (2005) agreed that if the learner wants to be fast in comprehending a text, he or she needs to practice skimming and scanning. Through reading different articles, the researchers suggested a way to practice skimming.

1) To get a conclusion

- To get use of the title and sub-titles.

- To read the first and the last sentences of each paragraph.

2) To answer general questions.

- To remember the information we need.

- To determine the things that help to find the answer from the question itself.

- To read the first sentence and the keywords in each paragraph.

- To move the eyes rapidly to get signs about the answers.

- To read the specific part to get the answer.

In talking about scanning, the researchers see that Wirringachitra's (1982) idea is suitable which is similar to what is mentioned in talking about scanning. Speed reading techniques are suggested through browsing in the internet as follows:

- The hand: Move your hand slowly straight down the page as your eyes follow.

- The card: to move the card to be followed by the brain.

- The sweep: to use the hand to help draw the eyes across the page.

- The hop: to lift fingers and make two bounced on each line to catch sections of three or four words and then move on.

- The zig-zag: to take the hand and cut the text in a diagonal motion for two or the line.

3. Fluent Reading Process – Theory

Fluency, regardless of whether in reading, speaking, listening, or a musical performance, often refers to three components: accuracy, speed, and fluidity (Segalowitz, 2000; Kuhn & Stahl, 2003). In the case of reading, fluency has been widely characterized as "the ability to read text rapidly, smoothly, effortlessly, and automatically with little attention to the mechanics of reading such as decoding" (Meyer, 1999, p. 284). Well-established previous research on reading (e.g., Grabe, 2004, 2009; Koda, 2005; Perfetti, 1999; Pressley, 2006) shows that fluent reading generally

involves lower-level and higher-level processes (Laberge & Samuels, 1974; Stanovich, 2000). The former represents the more automatic linguistic processes and are typically viewed as more skills-oriented, including word recognition, syntactic parsing, meaning proposition encoding, and working memory activation. This means a fluent reader must have the ability to "recognize the word forms, the graphic form and phonological information, activate appropriate semantic and syntactic resources, recognize morphological affixation in more complex word forms, and access her or his mental lexicon" (Grabe, 2009, p. 27). Lower-level skills must be processed rapidly and automatically and the automation of these lower-level skills is a requirement for fluent reading. Added to these lower-level processes are the higher-level processes, so-called comprehension processes, which involve understanding text meaning, interpreting the ideas represented by the text, using reading strategies if necessary, making inferences, drawing on background knowledge, and evaluating the information being read. For fluent readers, all of these processes need to work in parallel, quickly and efficiently, in other words, automatically. "Automaticity" is then at the heart of fluent reading ability, referring to "the absence of attentional control in the execution of a cognitive activity" (Segalowitz & Hulstijn, 2005, p. 371), and arises through constant practice of a routine procedure, like playing a piano or driving a car.

While automaticity of lower-level processing is considered essential to fluent reading abilities, working memory in fact is the locus of this processing activity (Grabe, 2004). Working memory is composed of a limited-capacity attentional control system—limited storage, limited

abilities to carry out multiple processes simultaneously, and holding information for just very brief periods. Due to the constraints of working memory, in reading processes if one expends too much attention on lower-level processing (e.g., word decoding), then less attention will be available for comprehending content (Laberge & Samuels, 1974; Samuels, 1994).

Reading fluency is seen as primarily achieved through automatization of word recognition, which allows one to have more attentional resources to focus on the meaning of the text rather than on decoding words. Reading fluency is usually measured by reading rate, calculated by words per minute (wpm). Research in L1 reading shows that in silent reading a normal reader reads at approximately 250 to 300 wpm (Carver, 1990; Rayner, 1998). However, many second language college students perform well below these figures (Taguchi, Takayasu-Maass, & Gorsuch, 2004; Nation, 2005). Although automaticity in word processing alone is not sufficient to determine reading comprehension, which can be profoundly affected by many other factors (Fraser, 2007), such as reading purposes, tasks, text difficulty (involving grammatical structure and vocabulary), as well as topic familiarity, or even readers' physical condition (e.g., being tired or unable to concentrate), it is a good indicator of reading fluency because fluent readers usually have fast word recognition abilities.

4. Components of Fluency

Students who read fluently sound as if they are talking. Their reading is smooth, paced and pleasant to listen to. Fluency is an

important component to successful reading. "Our education system tends to overlook instruction on reading fluency, while stressing decoding and comprehension. Subsequently, many children are not fluent readers, and a national concern has emerged" (Nation, 2005). The research findings on fluency instruction has lead the National Reading Panel to consider fluency instruction as one of the five components to successful reading alongside phonemic awareness, phonics, vocabulary, and comprehension.

Reading fluency is defined as "the ability of readers to read quickly, effortlessly, and efficiently with good meaningful expression" (Rasinski, 2003, p. 26). Fluency has three phases which include rate, accuracy and prosody. Rate is determined by measuring the speed of the reader. Accuracy refers to a reader who can read by sight or decoding with a minimal amount of mistakes. Prosody refers to a reader who reads with pacing, expression and phrasing.

5. Reading Rate

Reading rate is how quickly a student reads a particular reading passage at his level in a given time. Reading speed is important but should not be the primary goal of reading fluently. "Although rate may be a measure of word recognition automaticity, it does not capture the prosodic component of reading, that component that connects comprehension, or the making of meaning, to fluency. For students to read with appropriate expression, they need to be cognizant of the meaning of passage. We feel that reading rate does not provide the complete picture of reading fluency" (Rasinski, Rickli & Johnson, 2009, p. 352). A student who only reads words quickly but does not use

expression or understand the words he is reading is lacking a major part of the equation. Likewise a child who reads each word accurately but lacks expression in his reading is not really paying attention to the cues and nuances of the language of the text. This is not reading fluently. Fluency must include all components of rate, accuracy and prosody.

6. Reading Accuracy

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. "Cognitive attention or energy that must be applied to the low-level decoding task of reading is cognitive energy that is denied to the more important task of comprehending the text. Hence, comprehension is negatively affected by a reader's lack of fluency" (Rasinski, Rickli & Johnson, 2009, p. 351). Students who demonstrate accuracy in reading have mastered sight words and developed decoding strategies. These decoding strategies allow students to stretch out unknown words and successfully read them. Although it is important for students to master sight words to improve word identification, knowing reading strategies for decoding unknown words is equally valuable. Students should not focus on word memorization as that can be counterproductive to using strategies for decoding unknown words (Hicks, 2009/2010 p. 320).

7. Assessing Reading Fluency

Classroom teachers and reading specialist use the running record (Clay, 1993) to assess reading development. "A running record is a test of contextual reading accuracy and student strategy use in which students read leveled connected passages under untimed conditions. The examiner typically makes a record of the types of errors (e.g., deletions, insertions, omissions) that each reader commits during oral reading" (Fawson, Ludlow, Reutzel, Sudweeks & Smith, 2006, p. 113). The student reads from one copy or text and the examiner has an identical copy in front of him/her to follow as the student reads. This notation is typically done by ticking, or marking a check above each word that the student reads accurately. Errors are noted above or below the word depending on error. The running record was initially used in the Reading Recovery Program by reading professionals as a diagnostic tool to measure the progress of struggling readers. Now it is widely used by classroom teachers as well as reading specialists to assess reading accuracy, diagnosis reading problems and monitor progress. The type of text does need to be taken into consideration as different texts are read for different purposes and could result in slower or faster reading rates.

As a running record is conducted, if a mistake or miscue is made, it is noted above the word. The number of miscues will be counted. A teacher may be seeking specific information in regards to the type of reading errors made. More detailed information can be gleaned by sorting the miscues into types of errors. Then a computation is determined by dividing the number of correctly read words by the number of words in the passage. This is the accuracy rate. Using a running record and miscue

analysis will give the teacher a more thorough understanding of the mistakes that a child is making. "Through careful examination of error patterns, a teacher can determine which strategies the student is using and which strategies the student is failing to use" (Hudson, Lane & Pullen, 2005, p. 705). This information can then be used to drive instruction or intervention when these specific areas are targeted. Assessing reading rate is determined by timing students reading of an appropriate text while recording the errors made. Assessing accuracy is accomplished by timing the student as he reading a familiar text. Accuracy means that the student is reading the words in the text correctly. Timed readings are conducted using books or passages the student has read before that are at an independent reading level (i.e., books the student can read with 95% accuracy or above)" (Hudson, Lane & Pullen, 2005, p. 705). Assessing reading prosody is somewhat more subjective as the teacher makes a judgment of reading expression, phrasing and inflection based on listening to a student orally read a connected text.

8. Repeated Reading

To gain fluency in any activity, one must repeat or practice that activity until mastery is reached. That repetition often includes a certain skill, speech or movement. In much the same way, fluency is gained by practice. Fluent readers gain this level of mastery by wide reading or repeated practice of a text. This success does not come as easily for struggling readers.

A method that has been proven to aide these students is repeated practice of the same passage or repeated reading. Repeated reading is an

instructional method used to increase automaticity in reading. The technique of repeated reading is valuable for improving reading fluency because it allows students to practice a text over and over until the text becomes more and more familiar and students can decode the text automatically, giving students more cognitive capacity for understanding.

Samuels is the leading researcher in the field of repeated reading. His work from the 1970's continues to have a huge influence in the field of reading strategies that focus on practice and repetition. Repeated reading has been used with regular and special needs students, young children and adults. This practice has been successful as a widely adaptable technique used in intervention settings, whole group instruction and skill-based reading lessons. Numerous researchers have demonstrated the positive results of this method.

Another important effect of Samuel's work in fluency is the attention that it brought to the field of fluency instruction. After Samuel's research was published, educational research and practice began to focus their attention on the importance of fluency instruction in the classroom and how it is the key to reading for understanding. Samuel's research was re-published in 1979 in The Reading Teacher. Samuels was pleased to learn that more than 20 years later his strategy of using repeated reading to increase fluency was still valid. Samuels added four new findings in this re-publication. The first one is that, "the original findings had been replicated; that is a high degree of accuracy and speed develops in the practiced text. Two, there is a transfer of fluency to other portions of the text, even the parts that were not specifically practiced. Three, repeated reading is the most universally used remedial reading technique to help

poor readers improve reading skill. Four, repeated reading is now widely used widely to teach reading in foreign languages" (Samuels, 1979, p.381).

The technique of repeated reading practice requires a student to read a passage while a teacher records the reading speed and number of word recognition errors. The child practices the passage on his own. Subsequently the student reads the passage aloud to the teacher until a criterion rate is reached. As reading speed increased, reading errors decreased. The number of rereading necessary to reach the student's goal decreased.

An important finding in Samuel's work demonstrated that as the student continued to use this method, the data revealed that the student speed with each new passage increased from the previous one. "However, he also found that when students moved to new passages, their initial readings of those new pieces were read with higher levels of fluency and comprehension than the initial readings of the previous passage, even though the new passage was as difficult or more challenging than the previous piece" (Rasinski, 2003, p.4). These findings indicate that a general improvement in reading fluency had resulted by using repeated reading.

9. Methods of Improving Reading Rates

As mentioned earlier, reading is an important skill for L2 learners to develop, but mastering the skill to a degree of fluency is by no means easy; therefore, implementing some activities to develop learners' reading fluency is suggested as an essential component of L2 teaching. This study thus focuses on improving reading rates through a timed reading activity

integrated into a formal instructional curriculum. Reviewing the literature, several ways exist that can help learners overcome reading too slowly or improve reading rates (e.g., repeated reading, extensive reading, and timed reading activities).

Repeated reading refers to when learners read the same text many times until they become familiar with all the vocabulary and grammatical constructions. Repeated reading (or the rereading method) emerged mainly from the pedagogical implications of the theory of automatic information processing in reading (Laberge & Samuels, 1974). It was developed by Samuels (1979) as a pedagogical application to use with beginning L1 readers. This method provides beginning readers with an opportunity to practice a very basic skill (word recognition) and helps them move from the non-accurate stage to the accurate stage and eventually to the automatic level. Although this method has been widely used in L1 instruction with reading aloud (Kuhn & Stahl, 2003) and has been found to have the potential to develop fluency among beginning L1 readers, it is not so popular in the teaching of L2 (Taguchi, Gorsuch, & Sasamoto, 2006). The reasons could be that "fluency" has just emerged in L2 as an instructional goal, and repeated reading, as pointed out by Samuels (1979), is not a method for teaching all beginning reading skills but is a supplement in a developmental reading program.

However, empirical research conducted in an L2 context by Taguchi and associates (Taguchi, Takayasu-Maass & Gorsuch, 2004) have shown some positive effects on improving reading rates and comprehension. Another way of enhancing reading speed is to extensively read a great number of graded readers, which has been found to have a positive role

in learning to read fluently and leads to enhanced language acquisition. Reading a large quantity of easy texts allows learners to meet the same patterns of letters, words, and combinations of words again and again; learners then become quicker and more accurate in processing words, and develop a large sight vocabulary (Day & Bamford, 1998). Sight vocabulary refers to those words that readers are able to recognize automatically. However, as Stanovich (1992, p. 4) puts it, "efficient word recognition seems to be a necessary but not sufficient condition for good comprehension." Another important component for developing reading fluency is background or topical knowledge (Grabe, 2004).

As Samuels (1994, p. 831) states, "Automatic word-decoding skills and prior knowledge of a text's content may interact and strongly affect success in comprehension." When learners are exposed to a large quantity of varying texts, their topical knowledge may be enhanced (Grabe, 2004). With much sight vocabulary and resourceful background knowledge, a learner's reading rate should improve. This notion has been supported by several extensive reading studies exploring reading rates after reading abundantly in the L2 (Bell, 2001; Takayasu-Maass, & Gorsuch, 2004), all showing a positive effect.

10. Timed Reading Activities

Now let us look at the main focus of the current study—implementing a timed reading activity. The theoretical framework of the idea that timed reading improves reading fluency is based on research on working memory (i.e., short-term memory), referring to the information that is activated or given mental stimulation for immediate storage and

processing, and is characterized by having limited capacity and the fact that its content fades very quickly. These characteristics pose serious limitations during the reading process, a complex cognitive activity, because meaning construction or comprehension is mediated via the short-term working memory (Smith, 2004). If a reader reads too slowly (below 200 wpm), they may be reading word by word and forget what is being read, and the result is poor comprehension. To minimize the functional limitations of short-term memory in the reading process, a variety of strategies have been suggested, one of them being timed reading. Timed reading involves having students read under time pressure, the purpose of which is to improve reading speed to an optimal rate that supports comprehension rather than developing speedy readers. In addition, "time limitations may enhance reading comprehension by promoting mindfulness in students, a construct which involves exertion of more effort and motivation" (Walczyk, Kelly, Meche, & Braud, 1999, p. 156).

Many studies have shown that increasing the reading rate will improve reading comprehension. What then is an optimal reading rate? Carver (1990) made a distinction between five types of reading: scanning, skimming, rauding (just to understand the message), learning (to acquire the information), and memorizing (to be able to recall the facts) and stated that each type is associated with different reading rates. According to Carver, the average reading rate for a college student who is rauding is 300 wpm, 200 wpm for learning, and 138 wpm for memorizing. However, reading at a rate between 250 wpm and 350 wpm allows readers to comprehend a text most efficiently (Carver, 1982).

11. The Effects of Timed Reading in L1

There are several terms used to refer to ways of helping learners to increase their reading speed. These include paced reading (Cushing-Weigle & Jensen, 1996), accelerated reading (Breznitz & Share, 1992), and class- and self-paced reading (Anderson, 1999). These all involve having students read under some degree of time pressure. In an L1 context, several empirical studies have shown that reading under a moderate amount of pressure resulted in significant gains in reading speed and comprehension. In a series of studies, Breznitz and Share (1992), hypothesizing that increasing the stimulus presentation rate could minimize the functional limitations of short-term memory, investigated the impact of self-paced compared to fast-paced reading on the reading accuracy and comprehension of Israeli pupils reading short passages.

In the self-paced reading condition, students were requested to read all texts at their own natural pace as presented on the computer screen, and each text was erased immediately after reading was completed. Times spent for each text were recorded by a computer. In the fast-paced reading condition, the whole text appeared on the screen, and as soon as the participants started to read, material was erased letter by letter at the maximum per-letter rate calculated by the highest perletter reading rate achieved on the six texts in the self-paced reading condition. A series of STMsensitive tasks (e.g., recognition and wording recall, forward and backward sentence and order recall, recency versus primacy effects, and probed recall) all showed large gains in the fast-paced manipulation. The results of these experiments were consistent with Breznitz's earlier study (1987), showing that with texts presented at

the students' maximal normal reading rates, they averaged fewer reading errors and higher comprehension scores than in the self-paced conditions. However, with tests presented at their slowest reading rates, students' decoding accuracy improved, but significantly decreased in their comprehension. Another study by Walczyk et al. (1999) of university freshmen demonstrated comparable results, in which it was found that fluency improves comprehension scores and has a stronger relation to reading ability when students read under time pressure. However, some contradictory findings were shown in an experiment by Meyer, Talbot, and Florencio (1999), who explored the effects of time constraints on reading comprehension with college students under three conditions: no time pressure (90 wpm), mild time pressure (130 wpm), and severe time pressure (300 wpm). The results were that participants' performances on the three recall tasks uniformly improved as the speed decreased and they achieved best at the speed of 90 wpm. However, in a second experiment with younger and older adults, the best comprehension result was observed under mild time pressure. Overall, most of the above studies show that a moderate pressure facilitates reading rates and comprehension.

12. The Effect of Timed Reading in L2

As previously mentioned, reading fluency has not received as much attention in L2 as in L1 (Grabe, 2004; Nation, 2007) and most weight has been given to the training of accuracy (Davies, 1982). Very few L2 reading studies, therefore, look at the effect of reading fluency training on the improvement of reading rates. In a typical timed reading activity, learners

read a number of texts that are carefully controlled for vocabulary and length, time their reading speed for the text, and then answer comprehension questions. A recent study conducted by Chung and Nation (2006) with a group of 49 Korean university students shows that nearly all students made some advance and most learners made gradual improvement rather than a sudden jump in speed. Their students read a total of 23 texts over a period of nine weeks, varying from two to four texts a week, with 19 being read in class and five outside class. Their study shows that students' improvement ranged from 73 wpm (the average speed of the first three scores minus that of the last three) to 97 wpm (the highest rate minus the lowest one) to 132 wpm (the 20th passage reading rate minus the first one) using different scoring methods. However, this study involved no control group, comprehension was assessed but not reported on in the study, and some reading was done outside the class, which may have affected reliability. Another study by Cramer (1975) with 30 Malaysian elementary pupils also showed a great enhancement in reading speed in both their native language and English after reading eight passages in timed reading activities over four weeks. Although reading comprehension was assessed, no details were given.

Despite some flaws in the two studies, they suggest that L2 readers can be trained to read faster through rate-building activities. Another two studies integrated reading fluency training as part of the English proficiency curriculum in an English-speaking country. Cushing-Weigle and Jensen (1996) looked at reading rate improvement in university ESL classes. The reading rate development activities involved paced and timed readings, instruction in eye movement as well as reading strategies.

Students first read 400-word paced readings at an imposed rate that increased by 25 wpm weekly which was then followed by 1000-word timed readings at their own rate. Cushing-Weigle & Jensen (1996) reported that in the first year her students gained an average of 110 wpm over a 10-week course without decreasing comprehension. In their later studies, Cushing-Weigle and Jensen (1996) found that their students (n = 64) perceived a significant improvement in their reading speed and comprehension.

In their actual performance, the students' reading rate improved about 40 wpm, from 158 to 195, but their comprehension scores decreased from 6.59 to 5.80 out of 10. The authors explained the decreased comprehension score as being due to more difficult academic texts being used in the pretests and posttests rather than the simpler readings practiced in class. In addition, a carryover effect from simpler readings to more difficult academic texts was found for more proficient readers.

A more recent study by Macalister (2008) also involved a timed reading activity integrated within an English proficiency program. This study investigated changes in reading rate from the start to the end of a rate-building activity and from the end of a rate-building activity to the end of the language course to see whether students could maintain the reading rate gained. A total of 17 texts were read. The findings were that 25 out of 29 students increased by five to 143 wpm after reading 17 texts, and only four students did not improve in their reading speed. Fourteen students showed further gains from the end of the rate-building activity to the end of the language course. While the results were comparable to

Chung and Nation (2006), Macalister cautiously observed that the gains in reading speed may be due to a "practice effect." Practice effect here refers to the increase in reading rate at the end of a speed reading course being the result of students' having practiced reading the type of texts in the course. When they stop the practice, their gains in reading rate falls away from a peak. Macalister's claim is supported by evidence that some student gains in reading rates were not maintained when reading speed was reassessed at the end of the language course, with half of the students showing a decrease after stopping the speed reading training.

Is comprehension sacrificed while reading fast in L2? With the exception of Cushing-Weigle and Jensen (1996), no studies measure and report on student comprehension levels. It is very likely that learners may read at too fast a speed if comprehension is not assessed. In an L1 study by Just and Carpenter (1987), it was reported that speed readers could skim a text at 600-700 wpm but could only answer questions about the gist of the passage not the details. This highlights how purpose can affect reading rate and comprehension (Carver, 1990). Nation (2005) states that for careful silent reading, readers should score seven or eight out of ten on a comprehension test, comprehending approximately 70 percent to 80 percent; if not, learners should slow down and read more texts at a similar level until comprehension improves. How to balance speed and comprehension is of importance to educators.

13. The Theories of Speed

Myths about rapid reading

1. If you increase your reading speed, your comprehension will be reduced. Good readers score high on both speed and comprehension. But, it takes time and practice to get there.

2. Thorough "work" reading has to be slow. On the contrary, slow reading is dull and discouraging and provides few rewards. Slow readers miss the overall meaning of the material.

3. Skimming isn't real reading. Skimming IS reading. It is a vital part of rapid reading. It's the technique to apply when you are looking for something specific and/ or you want an overview of the whole document.

4. If you don't comprehend the first time or lose concentration, immediately reread. Going back to recheck what you have understood is very inefficient. It stops you from reading actively and anticipating what is coming next.

5. Technical documents can't be read rapidly. Technical documents lend themselves to rapid reading as these documents often give background info that the reader doesn't need.

6. Rapid reading of everything is boring. Untrue. You don't read everything at the same rate or intensity: you need to adjust your speed in accordance with the nature and content of the material.

7. When you read, you need to remember everything. Total recall is an impossible task and this attitude can stop you from trying to read at all. You need to set your goals for reading and determine what you need and don't need to remember.

The average university student reads at around 250 to 350 words per minute on fiction and non- technical materials. A "good" reading speed is around 500 to 700 words per minute. Some people can read 1000 words per minute or more on these materials. To find out how fast you read, take the Increase Your Speed: Reading Speed Test.

What determines reading rate

1. Purpose e.g. to understand information, for example, skim or scan at a rapid rate; to determine the value of material or to read for enjoyment, read rapidly or slowly according to your feeling; to read analytically, read at a moderate pace that permits you to interrelate ideas.

2. Nature and difficulty - depends on background knowledge and complexity of material

3. Internal structure – rate adjustment according to difficulty

What speeds you up?

Training your eyes

Humans have very good peripheral vision. In fact we can see about 180 degrees from a point in front of our eyes. Peripheral vision was necessary in ancient times to protect ourselves from predators. Even though we no longer need to fend off Sabre-toothed tigers, our peripheral vision is just as important today as it was thousands of years ago. This ability allows us to read more words than those you are looking directly at. Once you understand your eyes' patterns and build your reading confidence, you will no longer feel the urge to fixate on each word or regress and your reading speed will increase.

To speed up you'll need to:

• increase the number of words in each block

• reduce fixation time (¼ second per block or chunk of words is adequate)

• reduce regression

Speed strategies

Conditioning your eyes

1. Use a pacer or pointer. See Speed Reading: Using a Pacer.

2. Window Slot Technique

If you struggle with erratic eye movements, (i.e. your eyes jump around on the page and can't follow a left to right, line by line pattern), try using the window slot technique.

Use a postcard or thick cardboard and cut out the centre in the shape and size of one line of print. As you run the window down the page, the eye is limited to horizontal movements only. This technique is useful for all readers and particularly useful for readers who suffer from dyslexia or other reading challenges.

Skimming

Remember: skimming is reading. Skimming is taking mental notes of the outline/presentation of the material, picking up what stands out, and surveying headings and keywords.

Building your vocabulary

• Play/do word games and puzzles

• Read lots and widely

• Make a personal dictionary of new terms, jargon, phrases

• For second language speakers of English, vocabulary acquisition, both academic and non-academic, is an ongoing and daily process. Strive to learn a few new words each week. Reading to your kids can also be a fun and easy way to pick up useful vocabulary.

Other techniques to improve reading speed

• Improve concentration

• Improve memory and recall

• Reduce subvocalization

• Reduce interruptions, procrastination and stress

14. Comprehension

Good comprehension involves:

• Being able to select and understand what you need

• Retaining and recalling the information

• Linking the new information to existing information

14.1 Comprehension is affected by:

• Level of difficulty, complexity, and even interest

• Background knowledge

• Jargon, new vocabulary

• Knowledge of English language structure

14.2 Types of reading comprehension

According to Grabe (2009), there are 3 types of reading:

1. Content reading — understanding the information

2. Empathic reading — understanding the spirit of the message

3. Critical reading — combines the first two with analysis and evaluation

14.3 Comprehension strategies

SQ4R: Survey, Question, Read, React, Recite, Review

The SQ4R assists university students to read more effectively and efficiently. SQ4R is a powerful approach that incorporates a number of reading skills and techniques such as skimming, elaborating, note-making, and reciting.

14.4. Critical reading

In graduate school you will need to read critically most of the time, so it's important that you understand how to approach a text with a critical eye. Critical reading involves evaluating and judging the accuracy of statements and the soundness of the reasoning that leads to conclusions.

Critical reading raises many questions such as:

• Who/what is the author/source? Is the author/source credible? What are the author's purposes?

• Is the information relevant to the context?

• What are the author's conclusions?

• Does the author provide adequate support for the conclusion? What questions are the author trying to solve/answer?

• What are the author's underlying assumptions and are they warranted? What inferences has the writer made and are they justified?

What to consider when reading critically:

1. Underlying assumptions
2. The argument
3. Evaluating an argument

14.5 Critical reading strategies

1. Underlying assumptions

Authors rarely explicitly state all that they wish to communicate especially when they assume that their 'audience' has certain background knowledge, attitudes, and values. Therefore, it is the reader's job to be aware of the implicit messages.

For practice in detecting underlying assumptions see Critical Reading - Underlying Assumptions.

2. The argument

What is an "argument"? People present arguments to persuade others to accept claims.

1. Claim: a statement representing some event or idea about the way the world is or should be. You distinguish a claim from other statements if you can ask, "Is this statement true or false?"

2. Premise: reasons/evidence to support a claim. Arguments can have 1 or more premises.

3. Conclusion: the claim being defended by the reasons or evidence. (Do not confuse this with the other usage of 'conclusion' to mean the last part of an essay or presentation).

Therefore, an argument occurs when a claim is made and premises are put forward to justify a conclusion as true.

The arrangement for an argument is often (but not always) Premise 1 + Premise 2 + Premise 3 etc. + THEREFORE + Conclusion

15. Related Researches

Thi Ngoc Yen Tran (2014) studied reading speed improvement in a speed reading course and its effect on language memory span. The results found that the reading speed improvement in the speed reading course transferred to other types of reading and did not necessarily negatively affect comprehension. The results demonstrated that the treatment groups considerably expanded their memory span ($p<.05$). Strong relationships between speed increases in the speed reading course, speed improvement in other types of reading and memory span development were also found.

Anna C-S Chang. (2010) studied the effect of a timed reading activity on EFL learners: Speed, comprehension, and perceptions. Participants were 84 college students divided into an experimental and a control group. The test instruments involved pretests and posttests on reading speed and comprehension. Students' perceptions were based on a final written report toward the end of the course activity. Results show that students doing the timed reading activity increased their reading speed on average by 29 words per minute (25%) and comprehension by .63 (4%). The differences across two time periods for the experimental group were statistically significant but not so for the control group. Students who did the timed reading activity became more confident in

their reading and were impressed with the amount of the reading they had done without the teachers' guidance.

Mahmoud Sulaiman Hamad Bani Abdelrahman. (2014) studied effect of speed reading strategies on reading comprehension among the 2nd secondary students in English language. This study aimed to find the effect of speed reading strategies on developing reading comprehension among second secondary literary stream students in English language. The sample of the study consists of (42) students assigned into two groups who were chosen randomly from schools, a controlled group (21) students, and an experimental (21) students trained on speed reading strategies during the academic year 2013/2014. The study used a training material, pre and post reading comprehension tests were administrated (Rababa'h, 1991). T. test results revealed that there were significant differences at ($\alpha \leq 0.05$) among the students' means in favor of the experimental group. In the light of the results, it is recommended that teachers should train students extensively on the use of speed reading strategies.

Eileen Harris. (2010) studied evaluating the efficacy of reading fluency instruction. Among the indicators of reading difficulty, reading fluency is a strong predictor of overall reading problems. A multiple baseline across small groups of students design was used to evaluate the effects of explicit oral reading fluency instruction. Based on universal screening data, 6 fourth grade students who scored between the 25th and 50th percentile were provided with 30 minutes of explicit reading fluency instruction four or five days per week, for a total of 40 sessions each. The explicit instruction included multiple components of reading fluency,

including repeated reading, phrase drill error correction, explicit word analysis, and metacognitive reflection using reading-level controlled text. To examine differential effects over time, three of the students received the instruction after a short baseline, and the other students received it after an extended baseline period. Maintenance of skills was evaluated at four and eight weeks post treatment.

Ruskey, Nina. (2011) studied increasing fluency using repeated reading. During the course of four weeks, this small group met with researcher for thirty minutes each day receiving fluency instruction and reading poetry aloud. Upon the completion of the study, data was collected and analyzed. All students demonstrated improvement in fluency assessment and reading accuracy. Some students experimented with interpretation. The results of this study indicate that fluency instruction and practice using repeated reading is a successful strategy and should be included in the elementary classroom.

Paul Underwood et.al. (2012) investigated the effects of a six-month course in speed reading in three areas of reading proficiency development: 1) general reading comprehension, 2) knowledge of high-frequency vocabulary, and 3) reading-rate and accuracy.

The participants (N = 105) were Japanese students studying English as a foreign language in Grade 10 at a Japanese private senior high school, randomly assigned to an experimental group (n =51) which received the speed reading treatment, and a control group (n =54) which received supplementary activities focused on high-frequency vocabulary development. The findings indicated that both the experimental and

control groups made significant improvements in general reading comprehension.

However, there was no significant difference between the experimental group (M = 14.27, SD = 4.01) and the control group (M = 14.31, SD = 4.07); t (103) = -.051, p= .959. Both the experimental group (M = 1.29, SD = 2.52) and the control group (M = 1.35, SD = 2.49) increased their knowledge of high-frequency vocabulary. However, again there was no significant difference between the experimental group (M = 25.78, SD = 2.96) and the control group M = 25.61, SD = 2.24; t (103) = -.337, p= .737. In terms of reading-rate development, the findings indicated a significant increase (M = 47, SD = 41.99) t (50) = 8.01, p < .0005.

Finally, while higher levels of general reading comprehension and high reading speeds were correlated, the relationship was small, r=.19, n = 51. The range of findings emerging from this current study adds weight to the existing research and goes beyond those conducted in the Japanese context to date. One of the important questions these findings raise relates to the greater influence that other variables, such as lexico-grammatical knowledge, might have on the development of reading comprehension at this level of language proficiency.

Sathit Bowornkiengkai. (2011) studied effects of speed reading on Thai primary school EFL students' reading rate and comprehension. This research indicated that the fables were used as the materials to teach students to skim and comprehend the story. Over a period of 3 week, 5 lessons of skimming activities were taught to the experimental group while the traditional method was taught to the control group. The test instruments involved pre-test and post-test on reading rates and

comprehension, and a questionnaire survey to assess the students' perceptions on reading. On average, students in the experimental group improve by 38 words per minute or about 34%, while students in the control group increased reading speeds by 33 words per minute or about 29%. There was no significant difference in both groups' reading comprehension. There was also no relationship between the students' reading rate and their comprehension ability. The result from the survey shows that students in the experimental group had more interest in reading faster after the 3-week course.

In conclusion, speed reading approach can enhance reading rate and reading comprehension of Thai students from primary school to university level. Moreover, lessons of skimming and scanning activities were taught to the experimental group while the traditional method was taught to the control group which confirmed that this approach can improve reading comprehension of the student very well and a questionnaire survey to assess the students' perceptions on reading.

Chapter 3

Methodology

Introduction

Chapter 3 begins with a description of the research design, the population and sample, variables, research instruments, construction and development of research instruments, collection data and statistic used in data analysis.

This chapter presents the research method that was used to investigate the efficiency of speed reading and English reading comprehension of undergraduate students in Thailand. This study measured comprehension achievement scores of undergraduate students compared to the students' English reading achievement before and after using speed reading techniques for undergraduate students in Thailand, a case study at Thai-Nichi Institute of Technology, Bangkok, to compare reading ability of sampling group and control group and to survey the undergraduate students' satisfaction towards the speed English class.

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.

Research Population and Samplings

1. Population and samplings

1.1 The population was first year undergraduate students at Thai-Nichi Institute of Technology in second semester of 2014 academic year. There were 700 students from 3 faculties; faculty of Engineering, faculty of Business Administration, and faculty of Information Technology

1.2 The samples consisted of 35 students who enrolled in English for Communication2 course (ENL-102) in second semester of 2014 academic year derived from a simple random sampling technique.

2. Variables

Variables in this study were as follows:

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

2. The satisfaction of undergraduate students towards speed reading approach

3. Contents used in this experiment

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

1. The Island of Britain (590 words)
2. Existentialism (528 words)
3. A Dystopian Society (455 words)
4. Synonyms of English Words (882 words)
5. The Role of Computers in School (438 words)
6. The Interstate Highway System in USA (600 words)

4. Research Instrumentation

4.1 Six speed reading materials for the undergraduate students in Thailand

4.2 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.

4.3 Questionnaires constructed by researcher to measure a satisfaction of undergraduate students towards speed reading approach

5. Construction and Development of Research Instruments

The researcher developed lesson plans of English speed reading technique and then constructed the ability test in English reading before and after learning the class as following principles.

Firstly, the researcher studied the objectives of speed reading learning focused on English reading skills and strategies, especially in skim and scan reading, reading for main idea, reading for topic sentences, reading for pronoun reference, reading for details, reading for sequencing events, reading for author's purposes, and reading for inference.

Secondly, the researcher derived six topics from the survey of needs questionnaire and interview 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

Thirdly, these six topics were modified to suit with undergraduate students, activities were provided in the class in a form of supplemental reading materials. Then, table of content specification was designed by determining the objectives, contents, topics, reading skill, reading activities, and evaluation.

Lastly, the constructed table was examined to test IOC by 5 experts and the lesson plans for all 6 weeks were written. Each lesson plan was composed of learning objectives, topic and contents, reading activities consisted of speed reading activity, timing for reading and summarizing activity.

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 (Cited Boonriang Khajonsil 2000: 165). 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 (1981: 168-183).

The questionnaire was separated into five rating scales as demonstrated by Likert (cited Best 1981: 181). 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.

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

IOC replaces Index of item-Objective Congruence

R replaces Experts' opinions

N replaces Number of experts

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 (1974: 161). Coefficient of reliability was 0.96

Data Collection

The process of try out

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 one undergraduate student who was not included in sample in second semester, 2014 academic year. The student had to study speed reading approach and did the 30 multiple choice test items after that. In this phase, the researcher enabled to investigate behavior, listen to the student's point of view as well as question about the problems during tryout both 6 topics of speed reading and the ability test. The effectiveness of speed reading was presented as following table.

Table 2: Table of scores from 6 topics of speed reading and ability posttest in **one** student

The assessment of speed reading ability of the one student, 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 Thaweerat, P. (2000) Quinn, E. et al. (2007).)

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

No.																				
lesson	1			2			3			4			5			6			pretest	posttest
Time/duration	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1	5.42	4.12	3.43	6.55	5.33	4.57	5.30	5.00	4.49	8.28	7.39	6.54	5.12	4.57	3.48	6.58	5.36	4.42	11	18
average	4.30			5.48			4.93			7.40			4.39			5.45				
	5.32																			

The result found that the student who involved in tryout process of speed reading approach got the average of mean scores in reading rate at moderate level (5.32). For the posttest, the student got 18 scores out of 30 which equal to 60.00%.

Table 3: Table of scores from 6 topics of speed reading and ability posttest in nine students

The assessment of speed reading ability of the nine students, 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 Thaweerat, P. (2000) Quinn, E. et al. (2007).)

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

No.																				
lesson	1			2			3			4			5			6			pretest	posttest
Time/duration	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1.	2	3	30	30
1	5.49	4.23	3.73	6.75	5.88	4.48	5.38	5.17	4.76	8.71	7.39	6.74	5.39	4.71	3.82	6.61	5.73	4.28	11	18
$\bar{X}$	4.48			5.70			5.10			7.61			4.64			5.54				
2	5.63	5.21	4.33	6.38	6.02	4.36	5.98	5.63	5.01	8.77	8.00	7.23	5.36	4.28	3.95	6.99	5.69	5.01	8	20
$\bar{X}$	5.05			5.58			5.54			8.00			4.53			5.89				
3	5.94	5.22	4.39	6.77	5.97	4.57	6.39	5.41	4.87	9.21	8.91	7.58	6.17	5.63	4.88	5.77	4.69	3.87	9	21
$\bar{X}$	5.18			5.77			5.55			8.56			5.56			4.77				
4	6.44	5.22	4.88	5.77	4.89	3.71	6.38	5.47	4.89	9.35	8.21	7.44	6.87	5.25	4.77	6.34	5.78	4.82	12	20
$\bar{X}$	5.51			4.79			5.58			8.33			5.63			5.64				
5	5.92	4.71	3.88	5.88	5.67	5.87	6.82	6.73	5.23	8.28	7.39	6.74	7.02	6.31	5.21	5.55	4.89	3.91	10	17
$\bar{X}$	4.83			5.80			6.26			7.47			6.18			4.78				
6	5.64	4.28	3.97	6.66	5.23	4.62	5.96	4.37	3.81	7.39	6.34	5.97	5.77	6.39	5.39	6.41	5.39	4.22	8	15
$\bar{X}$	4.63			5.50			4.71			6.56			5.85			5.34				
7	6.33	5.31	4.12	6.99	5.36	4.33	6.33	5.91	4.38	8.22	7.36	6.91	5.39	4.74	3.65	6.33	5.24	4.36	5	19
$\bar{X}$	5.25			5.56			5.54			7.49			4.59			5.31				
8	6.96	5.14	4.39	6.34	5.55	4.28	7.33	5.39	4.69	8.33	7.58	6.92	6.31	5.33	4.61	6.35	5.21	4.36	9	22
$\bar{X}$	5.49			5.39			5.80			7.61			5.41			5.30				
9	5.61	4.36	3.61	6.36	5.39	4.61	7.21	6.91	5.81	9.33	8.21	7.52	6.33	5.12	4.21	6.31	5.82	4.71	12	24
$\bar{X}$	4.52			5.45			6.64			8.35			5.22			5.61				176
	5.96																		65.18%	

The result from the table illustrated that the nine students who involved in tryout process of speed reading approach got the average of mean scores in reading rate at moderate level (5.96). For the posttest, the student got 176 scores out of 270 which equal to 65.18%.

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 (1981) 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

$4.50 \leq \bar{x} \leq 5.00$ refers students had the highest satisfaction

Chapter 4

Results of Data Analysis

This chapter presented the results of the study speed reading approach. There were three phases of the data collection process on speed reading approach for the undergraduate students at Thai-Nichi Institute of Technology, Bangkok and was divided into three phases as follows.

Phase 1: The result of data analysis scores from 6 topics of speed reading and pretest-posttest scores in 35 students who were an experimental group.

Phase 2: The result of data analysis for comparison speed reading ability of experimental group and controlled group.

Phase 3: The result of data analysis for satisfaction level of the 35 samplings from questionnaire to English speed reading approach.

Phase 1: The result of data analysis scores from 6 topics of speed reading and pretest-posttest scores in 35 students who were an experimental group.

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 4: 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 (adapted from Thaweerat, P. (2000) Quinn, E. et al. (2007).)

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

No.	1st	2nd	3rd	4th	5th	6th	Pre	Post
Speed/ min	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	$\bar{x}$	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							**80.56%**

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.

Table 5: 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 6: 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

Table 7: 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

Table 8: 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:

Table 9: the table of the students' satisfaction towards speed reading instruction in the overall and in each aspect

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.

Table 10: The table of Descriptive statistics of satisfaction scores in speed reading instruction in each aspect and in total

No.	Statement	mean	Speed Reading Activity						Total of mean	Rank order
			1	2	3	4	5	6		
	Contents									
1	The contents of instruction are clear and understandable.	$\bar{x}$	4.38	4.43	4.35	4.33	4.25	4.35	4.34	3
		S.D.	0.70	0.59	0.58	0.69	0.67	0.58	0.63	
2	The difficulty of contents is suitable for the learners	$\bar{x}$	4.73	4.70	4.70	4.40	4.45	4.40	4.56	1
		S.D.	0.45	0.46	0.46	0.67	0.64	0.63	0.55	
3	The sequence of content and exercises in each unit are appropriate.	$\bar{x}$	4.60	4.70	4.58	4.43	4.45	4.43	4.53	2
		S.D.	0.55	0.46	0.50	0.71	0.60	0.64	0.57	
	Total mean scores of content	$\bar{x}$	4.57	4.61	4.54	4.38	4.38	4.39	4.56	2
		S.D.	0.56	0.50	0.51	0.69	0.63	0.61	0.74	
	Teaching Materials									
4	Teaching materials are suitable.	$\bar{x}$	4.51	4.53	4.55	4.35	4.36	4.38	4.44	3
		S.D.	0.58	0.52	0.52	0.66	0.67	0.62	0.59	
5	Teaching materials are interesting and challenge the learners to study.	$\bar{x}$	4.48	4.63	4.60	4.45	4.35	4.55	4.51	2
		S.D.	0.55	0.49	0.55	0.68	0.70	0.60	0.60	
6	Teaching materials are various and motivate the learners to learn.	$\bar{x}$	4.48	4.53	4.53	4.35	4.38	4.60	4.52	1
		S.D.	0.51	0.51	0.55	0.66	0.77	0.71	0.59	
	Total mean score of teaching materials	$\bar{x}$	4.49	4.56	4.56	4.38	4.36	4.51	4.49	4
		S.D.	0.54	0.50	0.54	0.66	0.71	0.64	0.68	

	Instructors									
7	The instructors are friendly to students and give suggestions with taking care of students.	$\bar{x}$	4.48	4.63	4.70	4.35	4.25	4.38	4.46	2
		S.D.	0.52	0.49	0.46	0.77	0.74	0.67	0.60	
8	The instructors give a chance to ask questions in the class.	$\bar{x}$	4.45	4.55	4.63	4.37	4.34	4.49	4.47	1
		S.D.	0.55	0.54	0.50	0.70	0.72	0.64	0.69	
9	The instructors facilitate the students to do activities on their own.	$\bar{x}$	4.53	4.63	4.55	4.28	4.33	4.38	4.45	3
		S.D.	0.60	0.48	0.55	0.68	0.66	0.63	0.60	
	Total mean score of instructors	$\bar{x}$	4.48	4.60	4.62	4.33	4.30	4.41	4.65	1
		S.D.	0.55	0.50	0.50	0.71	0.70	0.64	0.81	
	Teaching-Learning Activity									
10	Teaching-learning activity is suitable to level of the learners.	$\bar{x}$	4.60	4.60	4.75	4.58	4.43	4.58	4.59	1
		S.D.	0.59	0.59	0.44	0.59	0.64	0.59	0.57	
11	Speed reading activity can enhance reading ability of the learners.	$\bar{x}$	4.48	4.70	4.70	4.28	4.28	4.48	4.48	3
		S.D.	0.55	0.46	0.46	0.72	0.72	0.60	0.58	
12	Repeated reading uplifts reading competency and reading comprehension very well.	$\bar{x}$	4.60	4.58	4.75	4.53	4.48	4.50	4.57	2
		S.D.	0.50	0.53	0.44	0.64	0.64	0.64	0.56	
	Total mean scores of teaching-learning activity	$\bar{x}$	4.56	4.62	4.73	4.46	4.39	4.52	4.52	3
		S.D.	0.54	0.52	0.44	0.65	0.66	0.61	0.77	
	Total of total	$\bar{x}$	4.52	4.60	4.61	4.39	4.36	4.46	4.55	
		S.D.	0.55	0.51	0.50	0.68	0.68	0.62	0.75	
	Rank of mean scores		3	2	1	5	6	4		

According to the table, it showed that the mean scores of all six speed reading activity were 4.55 (S.D. =0.75). Consequently, it was summarized that the highest mean score was on activity 3 ($\bar{x}$ = 4.61, S.D. =0.50). The second highest mean score was on activity 2 ($\bar{x}$ = 4.60, S.D. =0.51). The lowest mean score was on activity 5 ($\bar{x}$ = 4.39, S.D. =0.68). Further, the study of samplings' point of view towards speed reading approach in four aspects: Content; Teaching Materials; Instructor; and Teaching- learning activity could be concluded as

1. Content

Overall, it presented a high satisfaction toward content ($\bar{x}$ = 4.56, S.D. =0.74). The highest statement was *The difficulty of contents is suitable for the learners* ($\bar{x}$ = 4.56, S.D. =0.55) and the lowest one was on the statement of *The contents of instruction are clear and understandable.* ($\bar{x}$ = 4.34, S.D. =0.63).

2. Teaching materials

The overall of this aspect was ranked as a high satisfaction ($\bar{x}$ = 4.49, S.D. =0.68). The statement of *Teaching materials are various and motivate the learners to learn* was ranked as the highest one ($\bar{x}$ = 4.52, S.D. =0.59) and the lowest statement was on *Teaching materials are suitable* ($\bar{x}$ = 4.44, S.D. =0.59)

3. Instructor

The overall of this aspect was excellent ($\bar{x}$ = 4.65, S.D. =0.81). The highest mean score was on the statement of *The instructors give a chance to ask questions in the class* ($\bar{x}$ = 4.47, S.D. =0.60) and the lowest mean score was on the statement of *The instructors facilitate the students to do activities on their own* ($\bar{x}$ = 4.45, S.D. =0.60).

4. Teaching-learning activity

The overall of the last aspect was also ranked excellent ($\bar{x}$ = 4.52, S.D. =0.77). The highest mean score was on the statement of *Teaching-learning activity is suitable to level of the learners* ($\bar{x}$ = 4.59, S.D. =0.57) and the lowest mean score was on the statement of *Speed reading activity can enhance reading ability of the learners* ($\bar{x}$ = 4.48, S.D. =0.58). In conclusion, the mean scores of all six speed reading activities were 4.55 (S.D. =0.75). The highest mean score was on activity 3 ($\bar{x}$ = 4.61, S.D. =0.50). The second highest mean score was on activity 2 ($\bar{x}$ = 4.60, S.D. =0.51). The lowest mean score was on activity 5 ($\bar{x}$= 4.39, S.D. =0.68). The results indicated that high student satisfaction with the course, affirming hypothesis 4.

Chapter 5

Conclusion, Discussion and Recommendation

The purposes of this study were to study speed reading efficiency of undergraduate students in Thailand. The aims of this study, moreover, were to compare reading ability of undergraduate students before and after the class as well as to study the opinions and satisfactions with the method of speed reading of the undergraduate students in second semester of 2014 academic year derived from randomly samplings.

The instruments used in this study

1. Six speed reading materials for the undergraduate students in Thailand

2. The ability test consisted of 30 items and multiple choices conducted for measuring for English reading ability before and after learning English reading instruction. The difficulty of the test was during 0.20-0.80 and the ability of the discrimination of the test was over 0.20.

3. The satisfaction questionnaire was used for investigating the opinion of the 35 samplings toward speed reading approach in 4 aspects: content, teaching materials, instructor, and teaching learning activity. The 12 items of questionnaire consisted of 5 rating scales which were composed of strongly agree, agree, moderate, disagree and strongly disagree. In this part, the reliability of questionnaire was at 0.96.

Conclusions

According to the study and data analysis, the results of this study were concluded 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 that 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 (Goodman, 1994).

1.2 The teaching-learning activity constructed from the view of Williams (1994) 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 that 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 (2000) 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 (2009) 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 (Carver, 1992).

Recommendations

According to the study, the useful suggestions for further development and improvement were demonstrated as follows.

1. The results of the study presented that the reading efficiency of undergraduate students was at a moderate level. The techniques of speed reading should be created in instruction for varieties of learning languages and other subjects.

2. In the further research, the researcher should study about comparison learning ability and satisfaction with speed reading approach.

3. The researcher should study about comparison Computer Assisted Language Learning (CALL) and learning by instructor's teaching.

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Appendix

A: Speed Reading Activity

Speed Reading Activity 1

Start: _____.
Finish: _____.
Your Time: _____.

Topic: The Island of Britain

The islands of Britain have been inhabited by various cultures during the course of the last 500,000 years, and archaeologists have been able to study this rich history through the careful analysis of artifacts which have been reclaimed from archaeological digs and excavations. The inhabitation of Britain by hominids during the last one-half million years is unquestionable, but because all of the pre-Roman inhabitants of current-day Britain had no written language, any insights and speculations are purely conjectural and are open to debate.

The time period spanning from approximately 600,000 years ago to about 10,000 years ago is deemed the Paleolithic period, and during this time permanent settlements were sporadic, at best, due to the constantly changing environment and brutal living conditions. Initial analysis of excavations indicate that Homo erectus, a predecessor to Homo Sapiens, was present in Britain starting at approximately 600,000 years ago, and that Homo heidelbergensis was present at about 500,000 years ago. The bone and remain records of Homo erectus and Homo heidelbergensis are sparse and largely incomplete, both for the reason that these people inhabited Britain so long ago and because there were very few of such inhabitants. During the early Paleolithic period, weather fluctuations, as can be presently measured by the analysis of polar ice core samples, were severe, and recurring ice ages most likely repeatedly drove settlers south. The ensuing movement of glaciers during repeated ice ages wreaked havoc on delicate evidence. There was, however, a rather lengthy warmer period that lasted from 400,000 to 180,000 years ago, during which settlements flourished and during which a large flint industry seems to

have thrived. The ice age that followed, however, from approximately 180,000 to 60,000 years ago, again drove out the settlers, and there is little proof of any occupation at this time.

The latter stages of the Paleolithic period, from approximately 30,000 to 10,000 years ago, saw the emergence of modern humans, Homo sapiens. During this time tools made of flint, bone, antler and mammoth ivory were in large supply as evidence by archaeological reclaims. At approximately 10,500 years ago, the weather again began to turn cooler, but this time, the inhabitants did not to leave, but rather weathered the impending minor ice age. Therefore, it is approximately from about 15,000 years ago that Britain has been settled without any interruptions.

The Mesolithic, and eventually the Neolithic periods, which began at approximately 10,000 years ago, saw the return of warmer weather, and it is during these times that the British Isles saw their greatest increase in population up to that time. Recovered evidence of woodworking tools, as well as proof of the domestication of the dog, indicate the emergence of a more stationary lifestyle, which also may be attributed to the rich source of local fish and wildlife that flourished as a result of the melting of the most recent ice age and subsequent forestation of the region.

Modern-day Britons, as some archaeologists like to call them, are characterized by the use of bronze and iron, both of which became prevalent around 2,700 BC and 700 BC, respectively. It is believed that the discovery of bronze was made at approximately 2,100BC, and that at approximately 700 BC, iron working skills were developed which further allowed for the expansion of the now cities and towns. Bronze lead to the use of better and better tools which could withstand repeated pounding and usage, and iron, which is even stronger than bronze, was leveraged by cities and leaders to build even more dynamic structures and cities.

Speed Reading Activity 2

Start: _____.
Finish: _____.
Your Time: _____.

Topic: Existentialism

In our individual routines, each and every person strives to be the best that he or she can be - a peculiar notion, because although many people aim for similar goals, the methods that are used to enact these goals can be grossly different. Just as no two individuals have the same fingerprint, no two people have identical theories on how to achieve a goal or to live life from day to day. Some people follow religious outlines to aspire to a level of moral excellence, while others employ other approaches. Towards the end of the nineteenth century and on through the mid-twentieth century, a movement called existentialism was born -- a kind of "philosophical theory of life". Existentialism is not a philosophy, but instead has been likened as a label for several widely different revolts against traditional philosophy. Even though the tenants of existentialism are complex, certain themes are common amongst existential philosophers and authors, including moral individualism, freedom of choice, responsibility, and alienation.

Fundamental to the understanding of existentialism is the conception of moral individualism. Existentialism rejects traditional ethical endeavors, which is contrary to the tenants of many philosophers prior to the existentialism movement. Philosophers since the time of Aristotle have held that most people aim for a common peak of ethical achievement. Aristotle argued for the existence of a divine being, described as the Prime Mover, who is responsible for the unity and purposefulness of nature. In order for humanity to attain such a climax, everyone must imitate the Almighty's perfect profile and strive to mimic

his actions. Aristotle's basic philosophy deduces that humanity strives for an identical peak of moral excellence, as judged by a higher entity.

Existentialism declares that the individual must choose his way. Most importantly, there is no predetermination. Since the universe is meaningless and absurd, people must set their own ethical standards. The universe does not predetermine moral rules. Each person strives toward a unique moral perfection. The nineteenth century Danish philosopher Soren Kierkegaard, who was the first writer to call himself existential, reacted against tradition by insisting that the highest good for an individual is to find his uniqueness. Kierkegaard's journal reads, 'I must find a truth that is true for me ... the idea for which I can live or die'. Existentialists believe that morality depends on the individual, rather than a supreme being

Next to moral individualism, the inevitability of choice is the most prominent existentialist theory. Existentialism asserts that people do not have a fixed nature, as other animals and plants do. Our choices determine who we are. The twentieth-century French philosopher Jean Paul Sartre proclaimed that the most important choices that we make are those that directly affect ourselves. Each character makes choices that create his nature. Existence suggests freedom where mankind is open to a future that is determined by choice and action. Choice is inescapable and central to human existence; the refusal to choose is a choice. Even when a person seems to be acting out a given role or following given orders -- for example, acting upon the orders handed down by society – the person is in fact choosing to do so.

Speed Reading Activity 3

Start: _____.
Finish: _____.
Your Time: _____.

Topic: A Dystopian Society

The topic of a dystopian society is one that is used frequently in literature. Authors often utilize such situations in their writing to satirize the society around them, or to provide a warning against what may happen to the world. Three of the most prominent dystopia literature novels are Brave New World by Aldous Huxley, 1984 by George Orwell, and Fahrenheit 451 by Ray Bradbury. In each of these novels, the respective author is attempting to accomplish a certain goal. In Brave New World, Huxley is warning society about the dangers of becoming too hedonistic and technologically advanced. Huxley also satirizes people who are constantly in pursuit of instant happiness. With the writing of 1984, George Orwell is warning against leaders who are hungry for power, who would not hesitate to strip individuals of every freedom if it meant prolonging their control. Lastly, in Fahrenheit 451, Ray Bradbury was responding to America's cultural environment in the 1950's, warning against extreme censorship, the disappearance of real relationships, and the development of a very fast-paced society.

As with most dystopian novels, the authors chose to include certain dystopian characteristics in their writing. Such characters and situations include powerful governing bodies, social classes, skewed relationships between individuals, a skewed sense of identity, censorship, technology, brainwashing, and rebellion by certain characters. In most dystopian literature, the governing body exerts a great amount of control over the lives of the people, often controlling their very actions and thoughts. The citizens are divided into distinct social classes, and they have no control

over the matter. Oftentimes, the government will predetermine the identity of an individual, and emotionally, all subjects are identical. In a dystopian society, the government uses several key methods in an attempt to control the lives of individuals and to mandate the mere identities of individuals. For example, censorship is defined psychologically as the "prevention of disturbing or painful thoughts or feelings from reaching consciousness except in a disguised form," and in dystopian novels, those people who have absolute power claim that censorship protects the people for their own good. However, dystopian rules also use censorship to ensure that the supreme leadership and dictatorship of the leading quorum is maintained. Similarly, technology is "the application of science, especially to industrial or commercial objectives," and it is generally assumed that technology is crucial for any powerful nation or state. However, in dystopian societies, technology is used only to further the goals of the government.

Lastly, brainwashing is "the application of a concentrated means of persuasion, such as an advertising campaign or repeated suggestion, in order to develop a specific belief or motivation," and all citizens in a dystopian society have had their minds molded through the use of brainwashing techniques.

Speed Reading Activity 4

Start: _____.
Finish: _____.
Your Time: _____.

Topic: Synonyms of English words

It is not uncommon for close synonyms to be understood to share the same meaning. The difference between words like "hard" and "difficult", for example, goes tragically unnoticed. One may employ one or the other with complete indifference, postulating no discrepancy between them. In general this is well and good; most people lack the scrupulous pedanticalness to quibble over such trifles. Nevertheless, for those of us with ample compulsiveness (and time), it is of significant value to comprehend such nuances.

Take for example the following sentences: 1) the test was hard. 2) The test was difficult. Is the difference between these synonyms readily apparent? Is there a noticeable difference between them at all? Indeed, these questions are valid and warrant answer. For, what would be the point to having multiple words with the exact same meaning? No, that would be superfluous; the English language being far too economical. While many close synonyms share similar, if not the same, dictionary definitions, the feeling, or *mood,* they convey is utterly singular. Although a dictionary can provide information about word meanings, pronunciations, etymologies, inflected forms, derived forms, et cetera, it cannot communicate how it *feels* to use a word.

So, if there is indeed a difference between words like "hard" and "difficult", what is it? To begin, "hard" is pragmatic and realistic, firmly grounded in reality. It is a utilitarian word that gets the job done and doesn't apologize for its brusque, uncouth nature. On the other hand, "difficult" is eloquent and refined. It is civilized, willing to expend the

effort necessary to appear urbane. Why, the mere difference in sonic quality between them is striking enough. "Hard" makes a quick, unassuming sound, having but a single syllable (voiced under certain inflections, it can even come across as harsh), while "difficult" is more lengthy and melodic, its number of syllables totaling three times that of its counterpart. Furthermore, "hard" is more likely to be used in casual, informal circumstances, or to communicate an idea "on the go" or simply to "get it out" as the sayings go. It is used without pretense, and does not maintain a feeling of being overly concerned. In terms of daily usage, "hard" may be employed by an exhausted brick mason when posed with the question, "How was your day?" Conversely, "difficult" may be used by a military general upon explaining to his or her superior the progression of a particularly taxing campaign.

Similar to "hard" and "difficult", the words "weird" and "strange" too are close synonyms, and may seemingly be used interchangeably. Take for instance the following sentences: 1) Sea monkeys are weird. 2) Sea monkeys are strange. Contrary to popular belief, these sentences are not tautologous. So how do they differ? Their dictionary definitions are nearly identical, so the difference does not lie there. Rather, the difference involves the feeling, or *mood*, that these words convey. Notice that while "weird" and "strange" both have but one syllable, the latter has a remarkably distinguished feel. Similar to "hard", "weird" conveys a more basic, a more *crude*, and sentiment. Something "weird" is crass or gross, and is typically undesirable. No one wants to be associated with something "weird". If trying to impress someone, one probably doesn't want to be categorized among the "weird". On the other hand, if something is labeled as "strange", it is not necessarily bad. Rather, something "strange" is simply abnormal, or unusual—a deviation from what is expected. This distinction between "weird" and "strange" is so pronounced that the latter can be used as a euphemism for the former in certain situations. For example, notice how a simple substitution is able to make the following sentence less offensive: "Your mother's cookies taste weird" compared to " Your mother's cookies taste strange". In the former

sentence, the speaker sounds as though he or she is insulting your mother's cookies, stating that they taste bad. In the latter sentence, however, the speaker sounds as though the cookies simply taste different, or unusual, compared to what he or she is used to—the difference owing to the innocuous addition of too much flour, perhaps.

Finally, let's look at the synonyms, "happy" and "glad". As in the aforementioned cases, these words seem to have little or no discernible difference between them. Take for example the following sentences: 1) Tommy is happy because he got a new bike. 2) Tommy is glad because he got a new bike.

Most understand these sentences to have the same meaning. And again, upon consulting a dictionary, one will find highly similar, if not the same, definitions. But these definitions lack the feeling, the unique emotional charge that these words convey. The word "happy" conveys a sense of levity, or a carefree attitude. The thought of someone who is "happy" conjures the image of a bright-eyed, ruddy, smiling face. One is "happy" on the morning of his birthday, discovering a new puppy bounding into his bedroom. On the other hand, the word "glad" conveys a sense of relief or contentment. The thought of someone who is "glad" conjures the image of a man standing crossed-armed, nodding gently, a stoic grin crossing his face. One is "glad" when he sees that the child's lost puppy has been found, and was merely frolicking too far from home.

Granted, the notion that close synonyms can be used interchangeably is prevalent among English speakers. And alas, the dictionary—the text purported to be responsible for clarifying such issues—is of little assistance. In the end, it is left to us, the speakers of the language, those actively responsible for maintaining its sustenance and generation, to understand how these words make us feel and what mood we are inclined to attach to them. Using the examples and insights described above, one may come to recognize these subtle, yet crucial, differences.

Speed Reading Activity 5

Start: _____.
Finish: _____.
Your Time: _____.

Topic: The Role of Computers in School

The role of computers in the development of a young child has been a widely controversial topic for decades, and both parents and educators have put forth both concerns about the potential benefits as well as harms to young children. Critics argue that introducing technology in schools only wastes money and time, and that instead children should be allowed to develop essential learning and social skills through interaction with other students. On the other hand, proponents to the idea suggest that children should take advantage of the newest technologies and that children should learn to how to become adept at utilizing such technologies as a means to further their success in their eventual entering of the workforce. There are also some concerns that the most modern technologies are not being optimized and utilized in the best way possible.

Both critics and proponents of computers in the classroom agree that the early, formative years of any child are when physical, social-emotional, language, and cognitive skills are acquired. Perhaps the most researched area of development in relation to computer use has been that of cognitive development and the affect that modern technology has on a child's mind. Are computers being used properly to enhance and hasten a child's cognitive development, or are they inhibiting intellectual growth? Can technology support the specific needs of children, or does it take away from essential developmental experiences?

Recent research on brain development has focused on the capabilities of young children, the stages and styles of learning, and social-emotional development. Such research has showed that although

children may lack knowledge and experience, they have ample reasoning ability. Given appropriate stimuli, such as close interaction with caring adults and engaging hands-on activities, most children have been shown to dramatically improve their mental developmental skills. A study by the National Research Council found that early learning is assisted by the supportive context of the family and the social environment, through the kinds of activities in which adults engage with children. The influence of the two most renowned learning theories of psychology, Piaget's theory and Vygotsky's constructivism theory, are evident in the most recent research efforts, and it is in considering their models of development that we can make some assessment about the significance of a computer's role in a child's development process. Researchers have attempted to apply the developmental theories of Piaget to children's computer usage. In considering the Piagetian tasks of classifying and categorization, researchers have made several interesting observations about computers and cognitive development. For example, it has been suggested that a child sorting grocery items in the kitchen is a sign of mental development.

Speed Reading Activity 6

Start: _____.
Finish: _____.
Your Time: _____.

Topic: The Interstate Highway System in USA

The year 2006 was the golden anniversary, or the 50th birthday, of the Dwight D. Eisenhower National System of Interstate and Defense Highways. This system, usually referred to as The Interstate Highway System, is a system of freeways named after the U.S. President who supported it. The system is the largest highway system in the world, consisting of 46,876 miles (75,440 km) of freeways. The construction of the interstate highway system is an important part of American history. It has played a major role in preserving and maintaining the American way of life.

The Interstate highway system has several major functions. One of its major functions is to facilitate the distribution of US goods. Because the interstate passes through many downtown areas, it plays an important role in the distribution of almost all goods in the United States. Nearly all products travel at least part of the way to their destination on the Interstate System. Another major function of the Interstate system is to facilitate military troop movement to and from airports, seaports, rail terminals and other military destinations. The Interstate highways are connected to routes in the Strategic Highway Network, which is a system of highways that are vital to the U.S. Department of Defense.

Today, most of the Interstate system consists of newly constructed highways. The longest section of the Interstate system runs from Boston, Massachusetts to Seattle, Washington. It covers 3,020.54 miles. The shortest two-digit interstate is from Emery, North Carolina to Greensboro, North Carolina. It covers only 12.27 miles. All state capitals except five are served by the system. The five that are not directly served are Juneau,

AK, Dover, DE, Jefferson City, MO, Carson City, NV, and Pierre, SD. The Interstate Highway System serves almost all major U.S. cities.

Each Interstate highway is marked with a red, white, and blue shield with the word "Interstate," the name of the state, and the route number. Interstate highways are named with one or two-digit numbers. North-south highways are designated with odd numbers; east-west highways are named with even numbers. The north-south Interstate highways begin in the west with the lowest odd numbers; the east-west highways begin in the south with the lowest even numbers. There are mile markers at each mile of the Interstate system, starting at the westernmost or southernmost point on the highway. Every Interstate highway begins with the number "0." Interchanges are numbered according to their location on the highway in relation to mileage; an exit between milepost 7 and milepost 8 would be designated "Exit 7." This system allows drivers to quickly estimate the distance to a desired exit, which is a road leading off the highway. Despite the common acceptance of the numbering system on the Interstate highways, some states have adopted different numbering systems. For example, a portion of the Interstate 19 in Arizona is measured in kilometers instead of miles since the highway goes south to Mexico.

Since the Interstate highways are freeways – highways that do not have stop signs and cross streets – they have the highest speed limits in the nation. Most Interstate highways have speed limits between 65-75 miles per hour (105-120 kilometers per hour), but some areas in Texas and Utah have an 80 mile-per-hour (130 kilometer-per- hour) speed limit.

The federal government primarily funds interstate highways. However, they are owned and operated by the individual states or toll authorities in the states. The federal government generally funds up to 90% of the cost of an Interstate highway, while the states pay the remainder of the cost.

B: Test Specification

Table of Test specification

Reading skill	Mode	Type of Text	Cog. Level	Item type	Total No. of item	Weight %	Scoring	Times Mns
Sequence - Sequence of events	R	Passage	Tr.	M/C	1	3.33	1-0	2
Detail -Identifying the details	R	Passage	Com. /Mec.	M/C	8	26.66	1-0	16
Main idea -Identifying the main idea	R	Passage	Com.	M/C	2	6.66	1-0	4
Topic -Identifying topic sentence	R	Passage	Com.	M/C	2	6.66	1-0	4
Words meaning -identifying the meaning of words in context	R	Passage	Tr.	M/C	6	20.00	1-0	12
Reference -Identifying the pronoun reference in contexts	R	Passage	Tr.	M/C	3	10.00	1-0	6
Facts and opinion -identifying facts and opinion	R	Passage	Cr.	M/C	4	13.33	1-0	8
Author's purpose - identifying the author's purpose	R	Passage	Com.	M/C	3	10.00	1-0	6
Inference -Identifying the reference in contexts	R	Passage	Tr.	M/C	1	3.33	1-0	2
Total					30	100		60

Level of knowledge: M=mechanical K= knowledge T= transfer C=Communication Cri=Critical

C: P-R of Ability Test

Table of the difficulty of test items (p) and the discrimination of test items (r) of English reading proficiency test

Item	p	r	Item	p	r
1	0.48	0.43	16	0.43	0.69
2	0.65	0.67	17	0.47	0.65
3	0.73	0.37	18	0.47	0.61
4	0.33	0.71	19	0.68	0.62
5	0.67	0.42	20	0.63	0.57
6	0.53	0.23	21	0.33	0.27
7	0.73	0.49	22	0.73	0.67
8	0.79	0.67	23	0.53	0.71
9	0.47	0.67	24	0.72	0.43
10	0.67	0.53	25	0.47	0.84
11	0.72	0.27	26	0.23	0.48
12	0.63	0.67	27	0.73	0.41
13	0.65	0.53	28	0.27	0.27
14	0.78	0.53	29	0.53	0.53
15	0.46	0.29	30	0.46	0.75

D: IOC of Validity and Reliability of satisfaction questionnaire

Table of the index of item-objective congruence (IOC) of validity in the contents of satisfaction questionnaire derived from the assessment of 5 experts

Item	The scores of experts					Σ_x	IOC	meaning
	1	2	3	4	5			
1	+1	+1	+1	+1	+1	5	1	Effective
2	+1	0	+1	+1	+1	4	0.8	Effective
3	+1	+1	+1	+1	+1	5	1	Effective
4	+1	+1	+1	+1	+1	5	1	Effective
5	+1	+1	+1	+1	+1	5	1	Effective
6	+1	+1	+1	+1	+1	5	1	Effective
7	+1	+1	+1	0	+1	4	0.8	Effective
8	+1	+1	+1	+1	+1	5	1	Effective
9	+1	+1	+1	+1	+1	5	1	Effective
10	+1	+1	+1	+1	+1	5	1	Effective
11	+1	+1	+1	+1	+1	5	1	Effective
12	+1	+1	+1	+1	+1	5	1	Effective

E: Satisfaction Questionnaire

Satisfaction Questionnaire

Directions: Please mark the symbol ✓ in the box ☐ in real situation and real information

5 = strongly agree

4 = agree

3 = neither agree nor disagree

2 = disagree

1 = strongly disagree

No.	Statement	Level				
		5	4	3	2	1
	Content					
1	The contents of instruction are clear and understandable.					
2	The difficulty of contents is suitable for the learners					
3	The sequence of content and exercises in each unit are appropriate.					
	Teaching Materials					
4	Teaching materials are suitable.					
5	Teaching materials are interesting and challenge the learners to study.					
6	Teaching materials are various and motivate the learners to learn.					
	Instructors					
7	The instructors are friendly to students and give suggestions with taking care of students.					
8	The instructors give a chance to ask questions in the class.					
9	The instructors facilitate the students to do activities on their own.					
	Teaching-Learning Activity					
10	Teaching-learning activity is suitable to level of the learners.					
11	Speed reading activity can enhance reading ability of the learners.					
12	Repeated reading uplifts reading competency and reading comprehension very well.					

Suggestions

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.....

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.....

F: Reliability of Satisfaction Questionnaire

Table of reliability of satisfaction questionnaire from tryout with 30 students to find out Cronbach's Alpha Coefficient

Reliability

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.961	12

G: IOC of Validity and Reliability of Test

Table of the index of item-objective congruence (IOC) of validity in the contents of English reading proficiency test derived from the assessment of 5 experts

Item	The scores of experts					Σx	IOC	meaning
	1	2	3	4	5			
1	+1	+1	+1	+1	+1	5	1	Effective
2	+1	0	0	+1	+1	3	0.6	ineffective
3	+1	0	0	0	+1	2	0.4	ineffective
4	0	0	0	+1	+1	2	0.4	ineffective
5	+1	+1	+1	+1	+1	5	1	Effective
6	+1	+1	+1	+1	+1	5	1	Effective
7	+1	0	+1	0	+1	3	0.6	ineffective
8	+1	+1	+1	+1	+1	5	1	Effective
9	+1	+1	+1	+1	+1	5	1	Effective
10	+1	0	+1	0	0	2	0.4	ineffective
11	+1	0	0	+1	+1	3	0.6	ineffective
12	+1	+1	+1	+1	+1	5	1	Effective
13	0	+1	+1	+1	+1	4	0.8	Effective
14	+1	+1	+1	+1	+1	5	1	Effective
15	+1	+1	+1	+1	+1	5	1	Effective
16	+1	+1	+1	+1	+1	5	1	Effective
17	0	0	+1	+1	0	2	0.4	ineffective
18	+1	+1	+1	+1	+1	5	1	Effective
19	+1	+1	+1	+1	+1	5	1	Effective
20	+1	+1	+1	+1	+1	5	1	Effective
21	+1	+1	+1	+1	+1	5	1	Effective
22	+1	+1	+1	+1	+1	5	1	Effective
23	+1	+1	+1	+1	+1	5	1	Effective
24	+1	+1	+1	+1	+1	5	1	Effective
25	+1	+1	0	+1	0	3	0.6	ineffective
26	+1	+1	+1	+1	+1	5	1	Effective
27	+1	0	0	0	+1	2	0.4	ineffective
28	0	0	+1	+1	0	2	0.4	ineffective
29	+1	+1	+1	+1	+1	5	1	Effective
30	+1	+1	+1	+1	+1	5	1	Effective

31	+1	+1	+1	+1	+1	5	1	Effective
32	+1	+1	+1	+1	+1	5	1	Effective
33	+1	+1	+1	+1	+1	5	1	Effective
34	+1	0	+1	+1	+1	4	0.8	Effective
35	+1	+1	+1	+1	+1	5	1	Effective
36	+1	+1	+1	+1	+1	5	1	Effective
37	+1	+1	+1	+1	+1	5	1	Effective
38	+1	+1	+1	+1	+1	5	1	Effective
39	+1	0	+1	0	+1	3	0.6	ineffective
40	+1	+1	+1	+1	+1	5	1	Effective
41	+1	+1	+1	+1	+1	5	1	Effective
42	+1	+1	+1	+1	+1	5	1	Effective
43	+1	0	+1	0	+1	3	0.6	ineffective
44	+1	+1	+1	+1	+1	5	1	Effective
45	+1	+1	+1	+1	+1	5	1	Effective
46	+1	+1	+1	+1	+1	5	1	Effective
47	+1	+1	+1	+1	+1	5	1	Effective
48	+1	+1	+1	+1	+1	5	1	Effective
49	0	+1	+1	0	0	2	0.4	ineffective
50	+1	+1	+1	+1	+1	5	1	Effective
51	+1	0	+1	+1	+1	4	0.8	Effective
52	+1	+1	+1	+1	0	4	0.8	Effective
53	+1	+1	+1	+1	+1	5	1	Effective
54	+1	0	+1	+1	0	3	0.6	ineffective
55	+1	+1	+1	+1	+1	5	1	Effective
56	+1	+1	+1	+1	+1	5	1	Effective
57	+1	+1	+1	+1	+1	5	1	Effective
58	+1	+1	+1	+1	+1	5	1	Effective
59	+1	0	+1	+1	+1	4	0.8	Effective
60	+1	0	+1	+1	0	3	0.6	ineffective

H: English Reading Ability Test (30 items)

Passage1

The small country of Bhutan in the Himalayan Mountains is over 1,000 years old. In the past, it was poor country and not many people visited it. But nowadays, it is becoming more and more popular with tourists. Medicine and health are improving and the economy is growing. King Jigme Singye Wangchuck, the king of Bhutan until 2006, talked about his country's Gross National Happiness because he thought happiness was the way to measure his country's development.

But how do you measure happiness? Perhaps health is the best way because, as a famous doctor once said, "Happy people generally don't get sick." It's also easy to measure how many people feel ill or unhealthy in a country. For example, one survey says that Iceland is the healthiest country in the world because men and women live long time there, the air is very clean, and there are more doctors **available** per person than anywhere else in the world.

However, in a survey of the happiest countries in the world, Iceland was not near the top. The questions in this survey included: How much do you earn? How healthy are you? How safe do you feel? After visiting 155 different countries, the researchers decided that Denmark feels happier than other countries.

So does happiness equal money and good healthy? Not according to the artist Erik Krikortz has a website where visitors click on different happy or sad faces to comment on how well **they** sleep, their family and friends, their level of stress, their inspiration, and their physical activity. When you finish, his website adds the results for each area and gives you a final result for your happiness.

In his home city of Stockholm, Krikortz also shows the results of his survey as colored lights on the side of a large building in the city, for example, red means the people of Stockholm are very happy, green is OK, and purple means many people are sad. "A lot of people look at the building every day and see how we are", Krikortz says. The colored lights are also useful if you feel like visiting the city. If the lights are red, you know the locals are feeling happy!

Directions: Choose the best answer.

1. The topic of the passage is .....

a. Happiness of People around the World
b. Measuring Health and Happiness
c. A Survey of Happiness
d. Living a Healthy Life

2. The main idea of the passage is .....

a. to explain about measuring happiness
b. to inform about survey of happiness
c. to recall about living in happy country
d. to show about results of research in happiness

3. The word "available" in second paragraph could be replaced by....

a. existing
b. incredible
c. occupied
d. busy

4. The pronoun "they" in fourth paragraph refers to .....

a. faces
b. visitors
c. friends
d. results

5. Why does the result of a survey show that Iceland is the healthiest country in the world?

a. The weather is very nice.
b. People live long time.
c. There are a lot of doctors.
d. People are very rich.

6. Which statement is TRUE?

a. King Jigme Singye Wangchuck talked about his country's Gross National Happiness because he thought happiness was the best way to measure good health.

b. One survey says that Iceland is the healthiest country in the world because men and women live long time there.

c. After visiting 155 different countries, the researchers decided that Thailand feels happier than other countries.

d. The artist Erik Krikortz has a website where visitors click on different happy or sad faces to comment on how they look like.

Passage 2

Nowadays, every household produces electronic trash or e-trash- an old TV or computer, a printer, or an out-of-date cell phone. But when we throw these everyday items away, not many of us know where they go. The journalist and photographer, Peter Essick, decided to follow this e-trash to several countries around the world.

In particular, Essick found that a lot of e-trash goes to Ghana. There, he saw mountains of old computers in the local markets. The sellers resell some of them, but not many work. Instead, **they** recycle the broken computers by melting the parts inside. These parts contain a little metal such as copper or even gold. However, this recycling process is dangerous for the workers because it produces a lot of **toxic** chemicals.

As a result of his journey, Peter Essick thinks it is important to stop exporting e-trash. It is bad for the environment and it is bad for people's health. Instead, he believes manufacturers need to produce more eco-friendly electronics, in other words, electronic products that you can recycle cheaply, safely, and in the country where they are made.

Directions: Choose the best answer.

7. The topic of the passage is .....

a. Electronic Trash
b. The Journalist and Photographer
c. Recycling Process
d. Electronic Products

8. The main purpose of the author is to .....

a. explain about problems of e-trash.
b. inform about e-trash in Ghana.
c. stop exporting e-trash.
d. recycle e-trash cheaply and safely.

9. The pronoun "**they**" in line 7 refers to .....

a. mountains
b. computers
c. markets
d. sellers

10. The word "toxic" in line 9 could be best replaced by.....

a. harmless
b. poisonous
c. safe
d. undisruptive

11. Which statement is TRUE?

a. Peter Essick decided to follow this e-trash to several countries especially in Thailand.
b. The sellers resell some of computers, so they work effectively.
c. This recycling process is dangerous for the workers and the children.
d. Manufacturers need to produce more eco-friendly electronics.

12. What is the author's attitude through the passage?

a. positive
b. furious
c. negative
d. curious

Passage 3

The Masai are an African tribe of about half a million people. Most of them live in the country of Kenya, but they are also nomadic. Groups of Masai also live in other parts of east Africa, including northern Tanzania, and they move their animals (cows, sheep, and goats) to different areas of the region.

There are many other African tribes but, for many people, the Masai are the most well-known. They are famous for their bright red clothing and their ceremonies that include lots of music and dancing. One of the most colorful ceremonies is the festival of Eunoto, a rite of passage when teenaged Masai boys become men.

Eunoto lasts for many days, and Masai people travel across the region to a special place near the border between Kenya and Tanzania. The teenage boys who travel with them are called "**warriors**." This is a traditional name from the past when young men fought with other tribes. Nowadays, these warriors spend most of their time looking after their cattle.

When they get there, at the beginning of the ceremony, the teenagers paint their bodies. Meanwhile, their mothers build an "osingira", a sacred room in the middle of the celebrations. The older men from different tribes sit inside this place and the boys go inside to meet them. Later in the day, the boys run around the osingira going faster each time. It is another important part of the **ritual**.

The teenagers also have to change their appearance at Eunoto. Masai boys' hair is very long before the ritual but **they** have to cut it off. In Masai culture, hair is an important symbol. For example, when a baby grows into a young child, the mother cuts the child's hair and gives the child a name. At a Masai wedding, the hair of the bride is cut off as she becomes a woman. And so, at Eunoto, the teenage boy's mother cuts his hair off at sunrise.

On the final day, the teenagers meet the senior elders one more time. They get this advice: "Now you are men, use your heads and knowledge." Then people start to travel back to their homelands. The teenagers are no longer warriors but adult men who will get married, have children, and buy cattle. Later in life, they will be the leaders of their communities.

Directions: Choose the best answer.

13. According to the passage, what does "**warriors**" mean?
    a. the older men from different tribes
    b. the Masai women
    c. the leader of the tribe
    d. the tradition name
14. Which of the following that the word "**they**" in paragraph 5 refer to?
    a. Masai boy's mothers
    b. Masai leaders
    c. Masai boys
    d. hair
15. What does the writer state is the sacred room in the middle of the celebration?
    a. osingira
    b. nomadic
    c. Eunoto
    d. bride
16. Which of the following is not well-known in Masai celebration?
    a. clothing
    b. community
    c. music
    d. dancing
17. Which of the following is the synonym of the word "**ritual**"?
    a. event
    b. ceremony
    c. festival
    d. custom
18. According to the passage, which statement is not true?
    a. One most colorful ceremonies is the festival of Eunoto.
    b. The mother of teenage boys cuts his hair off at dawn.
    c. Hair is an important symbol of Masai culture.
    d. The older men from different tribe join the ceremony.

Passage 4

The Great Pyramid at Giza is one of the world's most amazing landmarks. Rising high above the Sahara Desert in the Giza region of northern Egypt, the Great Pyramid stands some 450 feet into the burning desert sky and occupies of an area of 13 acres. The rough climate of the Sahara has actually caused the pyramid to shrink 30 feet from its original height. The pyramid was such an amazing feat of engineering that it remained the tallest structure in the world for over 3800 years! The entire pyramid was originally faced with polished limestone to make it shine brilliantly in the sun.

Most Egyptologists, scientists who study ancient Egypt, agree that the Great Pyramid was built around 2560 BC, a little more than 4,500 years ago. It took tens of thousands of workers twenty years to build. The pyramid contains over two million stone blocks. Although most of the blocks weigh two or three tons, some weigh up to 80 tons!

The Great Pyramid of Giza was ordered built by the Pharaoh Khufu as a magnificent tomb. His vizier (advisor) Hemon is credited with being the pyramid's architect. Khufu's pyramid is actually part of a **complex** of pyramids that includes the Pyramid of Khafre, the smaller Pyramid of Menkaure, a variety of smaller pyramids and structures, and the Great Sphinx. The Great Pyramid of Giza is the last remaining of the Seven Wonders of the World.

19. Where is the Great Pyramid NOT located?

a. Northern Egypt
b. Sahara Desert
c. Giza
d. Southern Egypt

20. How many stone blocks make up the pyramid?

a. More than two million
b. 3800
c. 2,560
d. 4,500

21. Which of the following definitions best describes the meaning of "**complex**" in line 14?

a. group or set
b. army
c. pyramid
d. materials

22. Which is NOT part of complex of pyramids?

a. The Tomb of King Tut
b. The Pyramid of Khafre
c. The Sphinx
d. The Great Pyramid of Giza

23. Which of the following is FALSE?

a. Khufu was Hemon's vizier and architect.
b. Hemon was Khufu's vizier and architect.
c. The Pyramid took tens of thousands of works about twenty years to complete
d. The Great Pyramid is the last of the Seven Wonders of the World.

Passage 5

Americans today get less sleep than they did a century ago. In 1900, the average American slept 8.5 hours a night. Today, according to a recent poll, that figure has dropped to 6.5 hours. The National Sleep Center (NSC) estimates that drowsy workers cost U.S. business $18 billion a year in missed workdays and lower productivity. Fatigued drivers are thought to cause up to 100,000 highway accidents annually. To combat the problem of sleepy workers, a small number of companies have instituted nap policies, and have even set up nap rooms for workers. According, to researchers at the NSC, a 15-minute nap is enough to recharge a person's batteries for the next three or four hours. "I think it's fair to say that napping is an essential biological need. It's one of the pillars of god health.", says Dr. Jane Serby, director of research at the NSC. "I hope that businesses continue to recognize that that a 15-minute nap can play a vital role in increasing a worker's productivity and overall health. It should be encouraged", said Dr. Serby.

24. What did a poll find regarding sleeping habits?

a. Many Americans go to bed after midnight.

b. Most Americans get 6.5 hours each night.

c. Half of Americans report having problems getting to sleep.

d. A majority of Americans say they sleep more on weekends.

25. What does the NSC say about sleepy employees?

a. The increase insurance costs due to work-related injuries.

b. They cause businesses to raise prices for goods and services.

c. They are more likely to get fired or quit than other employees.

d. They cost billions of dollars in lost work time and productivity each year.

26. What does Dr. Serby want to encourage?

a. Changing work schedules to fit employee lifestyles.

b. Allowing employees to nap at work.

c. More research into sleeping habits.

d. A shorter work-week.

27. What is the closest meaning to the word "**nap**" in line 6?

a. Sleep lightly or briefly, especially during the day.

b. Sleep all day and all night.

c. A thing that a person or group does or has done.

d. Busy or vigorous action or movement

28. What can be inferred by the word "**vital**" in line 10?

a. Absolutely necessary; essential.

b. Able to be used for a practical purpose or in several ways.

c. Engaging or ready to engage in physically energetic pursuits.

d. In operating; working.

29. What is the main idea of the passage?

a. A problem of less sleeping in USA is illustrated.

b. The way to relax from sleeping of people in the world is presented.

c. The reason of snapping is discussed.

d. People want to sleep more than the past.

30. Number this Number these events from the passage in the correct order.

1. A small number of companies have instituted nap policies.

2. A 15-minute nap can play a vital role in increasing a worker's productivity and overall health.

3. The National Sleep Center (NSC) estimates that drowsy workers cost U.S. business $18 billion a year.

4. According to a recent poll, that figure has dropped to 6.5 hours.

a. 1-2-3-4

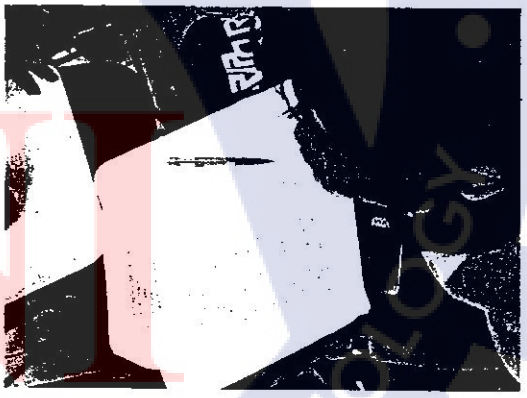
b. 4-2-3-1

c. 4-3-1-2

d. 3-4-1-2

I: Pictures of Speed Reading in the classroom

Pictures of students during speed reading activities



J: Lists of Experts

1. Assoc.Prof. Dr.Wisa Chattiwat

Faculty of Education, Silpakorn University

2. Assoc. Prof. Dr. Boonmee Phanthai

Faculty of Education, Ramkhamhaeng University

3. Asst. Prof. Dr. Chaiwichit Chianchana

Faculty of Industrial Education, King Mongkut's University of Technology North Bangkok

4. Asst. Prof. Dr. Wipanee Pengnate

English Department, College of General Education and Languages, Thai-Nichi Institute of Technology

5. Dr. Somsong Suparp

Faculty of Arts, Rajamongala University of Technology Phra Nakhon

K: Example of Table of Content Specification

Table of Content Specification of English reading instruction

Unit	Objectives	Text Type	Theme	Language Focus	Reading Skills	Reading Activities	Evaluation
1	- Read the passage to identify the details, then describe it - Skim or scan-read in order to get the main idea and details	Passage about The Island of Britain	Geography, Archaeology	**Vocabulary:** - inhabited - excavations -artifacts - etc. **Language focus:** Present Perfect Passive Voice **Function:** - describe details and identify the Island of Britain	- Skimming and Scanning main idea and details	**Record the time** -first time -second time -third time Checking understanding -summarizing -answering the questions	10 items M/C 5 True/False Gap 5

Bio data

Bundit Anuyahong *is a lecturer at College of General Education and Languages, Thai-Nichi Institute of Technology and is also Ph. D candidate at Silpakorn University in Curriculum and Instruction-Teaching English. He obtained double degrees for his master. One is Master of Education in TEFL from Silpakorn University and Master of Education in Educational Administration from Naresuan University. His paper publishing is more than 30 in international conference and journals.*