

Improving Undergraduates' Reading Comprehension and Order Thinking Skills through PSQ6R Method



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Abstract

The purpose of this research is to 1) compare the undergraduates' reading comprehension ability; and 2) study the students' order thinking skills related to reading comprehension ability, before and after learning by using PSQ6R method. The chosen sample size includes 47 undergraduates enrolled in the English Dhamma course at Nakhon Lampang Buddhist College in the 1st semester of academic year 2020. The samples are derived from the purposive selection method. The research instruments are English reading comprehension learning package adopting PSQ6R method and reading comprehension tests. The data are analyzed with percentage, mean, standard deviation, and t-test.

The research findings demonstrate that the undergraduates' reading comprehension ability and order thinking skills after learning through PSQ6R method is significantly higher than that of before, which is at .05 level of significance. Hence, the PSQ6R method can be used as an essential tool in developing the reading comprehension and thinking skills of a broad range of knowledge-based learners. The new body of knowledge indicates that the PSQ6R method seems to be suitable for enhancing reading comprehension and order thinking skills for students



with diverse background knowledge of English at Buddhist Colleges. The students in this context need more teacher's attention to scaffold them to read English texts or passages concerning Dhamma comprehensibly and successfully by using the PSQ6R method. The Bloom taxonomy can be used to gauge the students' order thinking skills and assist students to read English texts critically.

Keywords: Development; Reading Comprehension; Teaching Reading; PSQ6R Method; Order Thinking

Introduction

In Thailand, reading comprehension is considered a valuable skill to decode or decipher the things that individuals, especially students, read in their textbooks and/or any educational materials that are part of the class curriculum. Acquiring the reading skills is important and essential to succeed in a classroom setting. By constructing meaning that is accurate and reasonable from what the students read will and can help them understand the meaning of a written text (Mohammadi & Davobina, 2015). According to Zarei (2012), reading comprehension is considered an interaction between the reader and the text; the reader will read the written text and try to draw and interpret the meaning on what the text is describing, portraying, teaching, giving the intention of what the text is conveying. Alyousef (2005) states that reading comprehension is an interactive process where the reader interacts with the written text as he/she tries to interpret the meaning and acquire the knowledge that the text is conveying or communicating to the reader. Reading is one of the four language skills that students need to acquire to excel in their classroom settings. Reading is an advantage to students who have good academic grades. It is best that students acquire reading ability in order to succeed in their academic endeavors. Reading is a valuable ability, because searching for it is a tool for various sciences. When students have good reading skills it will also help in learning about



other subjects (Taotayong & Kuha 2011; Zare & Othaman, 2013; Calderon, et al., 1992; Suratsawadee, 1996).

Many schools, colleges, and universities in Thailand offer their students English as a foreign language (EFL), and reading skills tend to be the basic concept for the learners to practice, upon which they will be able to move on to the other skills. Hence reading is an urgent necessity for students to develop. Reading is also a very important activity in everyday life, and the technological progress is becoming more important. Therefore, people are more enthusiastic about reading to keep up with the world.

In an English course, students should have learning goals, including the ability to read a wide range of written texts in English, build up knowledge of English language which supports reading ability, adapt a reading style which is suitable for reading purposes, understand the structure of written texts in English, and comprehend the content of the text (Alyousef, 2005). Therefore, students need to have effective reading comprehension in order to succeed in a classroom setting through acquisition of gaining new knowledge and skills. However, most Thai students' reading comprehension skills are considered poor and not that proficient due to the way English being taught at schools in Thailand. There is a need for comprehension strategies to help students acquire the effective reading skills. Comprehension strategy lets students find purpose in what they are reading and become aware of what and how they understand the meaning of the written texts. According to Athipati (2014), teachers should show students reading strategies and procedures that allow students to process and understand what they read. In order to explain its meaning, the reader must interact with the passage.

Reading comprehension is the ability to process texts, understand meaning, and integrate with what the reader already knows. However, Thai students have a hard time reading and processing what the written words in the text really means. Therefore, Thai students

have limited ability to succeed in courses that are taught in English. Nurul and others (Nurul, et al., 2017) claim that students' academic achievements and successes are due to or have been highly correlated with the ability to read effectively. Most students lack communication skills because of their inability to acquire the necessary skills for reading comprehension in English.

Considering the problems mentioned above, teaching students how to read is a challenge for Thai English teachers. Good reading comprehension is necessary for the problem solving process, which is an integral part in explaining Buddhist ideas in English to other people. Students should be able to draw correct meaning from the passages and express the information in appropriate ways. It is assumed in this research that PSQ6R integrated with the “Dhamma in English” text can give insights into teaching reading comprehension effectively. The PSQ6R technique has been developed from SQ3R, SQ4R, and SQ5R. The SQ3R and SQ4R techniques are the concept developed by Francis P. Robinson (Khummasorn, et al., 2016). PSQ6R technique consists of the following steps: Purpose, Survey, Question, Read, Respond, Record, Recite, Review, and Refer. PSQ6R is expected to be valuable for students because it is an instructional strategy based on classroom cooperation that will give students the opportunity to learn well in groups, using their interpersonal skills and sub-skills by helping each other to achieve their goals. It is hoped that the PSQ6R strategy with reading comprehension teaching technique will be the right choice for solving learning problems in understanding English texts and acquiring the skills necessary to make reading comprehension a comfortable everyday activity.

Research Objectives

- 1) To compare the undergraduates' reading comprehension ability before and after learning by using PSQ6R method.



2) To study the undergraduates' order thinking skills related to reading comprehension ability before and after learning by using PSQ6R method.

Research Methodology

The present study adopted the quasi-experimental research with one-group pre-test and post-test design. The following are the details of the research methodology.

Participants

The participants in this study were 47 undergraduates of Mahachulalongkornrajavidyalaya University, Nakhon Lampang Buddhist College. The participants were chosen through purposive selection method from three faculties: 7 undergraduates from the Buddhist Faculty Program in Buddhist Studies, 35 undergraduates from the Faculty of Political Science in Political Science, and 5 undergraduates from the Faculty of Education Program in Buddhist Teaching and Counseling Psychology. The age and educational backgrounds vary among this group of students. These students are adult learners enrolled in Dhamma in English course in the first semester of the academic year 2020.

Research Instruments

The instruments used for data collection included English Reading Activity Package with activities using PSQ6R method and exercises adopted Bloom's Taxonomy to gauge the students' reading comprehension ability, five instructional plans, and pre and post-reading comprehension tests using Bloom's Taxonomy comprehension questions. The research instruments were verified by three experts in the field of English language teaching.

English Reading Activity Package

The English reading activity package consists of five units and the contents of each unit were adapted from Dhamma in English textbooks of Mahachulalongkornrajavidyalaya University. The units included 1) the

Triple Gem, 2) Cattari Ariyasaccani (The Four Noble Truths), 3) Gharavasa-dhamma (Virtues for a Good Household Life), 4) Panca Sila (Five Precepts), and 5) Ariya AttangikaMagga (Noble Eightfold Path). Each unit followed PSQ6R method for undergraduates to develop their reading comprehension and Buddhist contents. The contents and activities were verified by the three experts in English language teaching.

Instructional Plans

The instructional plans included five lesson plans for five units adapted from Dhamma in English textbooks of Mahachulalongkornrajavidyalaya University, Lampang Buddhist College. The instructional plans followed the nine steps of PSQ6R (P= Purposes, S=Survey, Q=Question, R=Reading, R=Reciting, R=Reviewing, R=Reflecting, and R=Referring). The contents of the instructional plans were verified by three experts in the field of English language teaching.

Pre-test and Post-test

The pre-test and post-test were multiple-choice questions with four options to choose from: one correct answer and three distracters. Each test has 30 items and the contents of both tests were paralleled.

Data Collection

Before the implementation of PSQ6R method, the undergraduates were asked to sit for the pre-reading comprehension test. Then the students studied the English reading activity package adopted PSQ6R method for 15 weeks. After that the undergraduates were asked to take post-reading comprehension test.

Data Analysis

The researcher analyzed the undergraduates' scores of pre and post-reading comprehension tests using SPSS program. The percentage, mean, standard deviation and t-test were employed for the data analysis. Then the analyzed data were compared so as to answer the research questions. Finally, the compared and analyzed data were presented descriptively.

Results

The results of the present study are divided into two sections as follows.

1. The comparison of the undergraduates' reading comprehension ability before and after learning by using PSQ6R method is presented in Table 1 below.

Tests	No. of Subjects	Total Scores	%	\bar{X}	S.D.	\bar{X} dif.	t	t-values
Pre-test	47	30	31.49	9.44	0.99	46	55.18	1.10
Post-test	47	30	74.61	22.38	1.67			

** Statistical significance at the level of .05 ($P \leq .05$)

Table 1: Comparison of the Undergraduates' Reading Comprehension Ability before and after Learning by Using PSQ6R Method

The results in Table 1 show that there is a significant difference in the mean scores between pre and post-reading comprehension ability. The results also show that the undergraduates' post-test scores are significantly higher than that of the pre-test at .05 level of significance.

2. The comparison of undergraduates' order thinking skills related to reading comprehension ability before and after learning by using PSQ6R method is presented in Table 2 below.

Question Types No. of Items	Pre-test			Post-test			\bar{X} dif.	t	t-values
	%	\bar{X}	S.D.	%	\bar{X}	S.D.			
Knowledge (5)	31.06	1.55	0.50	78.72	3.94	0.64	5.14	17.08	1.77
Comprehension (5)	28.50	1.42	0.50	77.02	3.84	0.59	1.16	15.37	1.77
Application (5)	32.34	1.61	0.49	76.60	3.83	0.60	4.95	14.36	1.77
Analysis (5)	33.19	1.66	0.47	71.06	3.55	0.50	1.04	26.67	1.77
Synthesis (5)	28.51	1.42	0.50	70.21	3.51	0.51	7.89	38.54	1.77
Evaluation (5)	35.32	1.76	0.42	74.04	3.70	0.46	4.08	26.13	1.77

Table 2: Comparison of Undergraduates' Order Thinking Skills Related to Reading Comprehension Ability before and after Learning by Using PSQ6R Method

The findings in Table 2 show that there is a significant difference in the mean scores between lower order thinking skills and higher order thinking skills for the pre and post reading comprehension test. As for the pre-test, the percentage scores of lower order thinking skills (Knowledge= 31.06% , Comprehension= 28.50, Application= 32.34%) are lower than that of higher order thinking skills (Analysis= 33.19% , Synthesis= 28.51, Evaluation= 35.32%). However, for the post-test, the percentage scores of lower of lower order thinking skills (Knowledge= 78.72% , Comprehension= 77.02, Application= 76.60%) are higher than that of higher order thinking skills (Analysis= 71.06% , Synthesis= 70.21, Evaluation= 74.04%). For the scores of reading comprehension which is the focus of the present study, the average scores of the post-test ($\bar{X}= 3.84$) were higher than that of the pre-test ($\bar{X}=1.42$).

Discussion

The discussion of the research results is divided into two parts based on the objectives of the present study. The details of each part are as follows.

1. The results reveal that the undergraduates' reading comprehension ability after learning through PSQ6R method was significantly higher than that of before learning at .05 level of significance. These findings provide more empirical evidence to support several studies (Nurul, et al., 2017; Basar & Gürbüz, 2017; Khummasorn, et al., 2016; Supayo, 2001; Sayasen, 2018). All these studies indicated that students who learned how to read in English through SQ4R and SQ5R improved their reading comprehension ability and thinking skills in some respects because the present study adopted the similar concept of 4R and 5R. However, the present study added the 6th R which refers to Refer stage. The purpose of this stage is to enable students to transfer the gained knowledge of reading skills to other productive skills such as



speaking or writing. The PSQ6R method is the new improvement and the innovation to the recent development of earlier approaches or models. Francis Robinson's approaches, which are SQ3R and SQ4R paved ways to newer models, including Pauk's SQ5R (Sangcharoon, 2010; Kamali, et al. 2018; Sayasen, 2018). PSQ6R adds the "P" step, which stands for purpose, and the additional 6th R step, Refer step. The PSQ6R has nine steps of the teaching and learning process, which are: Purpose, Survey, Question, Reading, Recording, Reciting, Reviewing, Reflecting, and Referring, respectively.

First of all, PSQ6R technique allows undergraduates to do group activities independently from the beginning of the steps to the very last step. The level of motivation and confidence is experienced when the undergraduates use their prior knowledge to formulate the correct response to the questions in the questionnaire that is administered during pre and post-test time. Confirmation of their response to the questions leads to a positive attitude and positive reaction when the response is correct. In other words, undergraduates feel good when they get the answers right on the tests or questionnaires. Encouragement and motivation from teachers and peers also add to the undergraduates' confidence and comfort to do well on these tests. It makes them feel really confident when they have support, and this support leads to achievements and success for reading effectively in English on the Buddhist texts.

Secondly, the post-reading activities (review, reflect, and refer steps) helped undergraduates develop intellectual skills. Other steps in the PSQ6R technique or approach also bring effectiveness. In the reconsideration step, undergraduates were able to perform well. In the reviewing steps helps undergraduates with evaluation and/or memory in comparison to what they have recorded. In other words, this step helps undergraduates connect and lead them to an appropriate understanding or clear decisions about incorrect data changes and other important

information. The reflect step built undergraduates a sense of worthiness and confidence to read well; they think deeply about issues or problems, presentations, and conclusion in the content, which they spent time organizing and developing the relationship between the text and the knowledge that they acquired. The following table shows the improvements that the undergraduates gained.

2. The research results indicate that the undergraduates' order thinking skill scores related to the reading comprehension ability after learning by PSQ6R method were significantly higher than before learning at .05 level of significance. These results are in line with those of Veeravagu and Nourdad (Veeravagu, et al., 2010; Nourdad, et al., 2018). All these studies reveal that there is a relationship between the degree of thought process necessary for reading comprehension and the ability of the students to answer the questions correctly. Interestingly, in term of order thinking skills, the results of the present study correspond to the Hayikaleng's study (Hayikaleng, et al., 2016) which indicated that Thai students' mean scores for the overall achievement in comprehension are only at average level. In addition, the findings from paired sample t-test illustrate that the students mean scores for LOTS (lower order thinking skills) questions are significantly higher than HOTS (higher order thinking skills) questions. Similar to the study of Hayikaleng and others (Hayikaleng, et al., 2016), in the present study, the undergraduates' post-test percentage and mean scores of lower of lower order thinking skills are higher than that of higher order thinking skills. This is because the present study focuses on the reading comprehension ability. The undergraduates must go through several steps of PQ6R into order to build up their reading comprehension ability. However, the order thinking skills of both LOTS questions and HOTS questions were adopted in this study as the unit completion quiz and the results of the post-test scores of LOTS and HOTS questions were higher than that of the pre-test scores. The order thinking skill



improvement is by product of the adoption of Bloom's Taxonomy and this leads to the suggestion that there should be a need to develop the HOTS for the students' in this study.

New Body of Knowledge

It is suggested from the results of the present study that the PSQ6R method can be an effective way to develop EFL students' reading comprehension and order thinking skills in some respects. Importantly, the PSQ6R method seems to be suitable for enhancing reading comprehension and order thinking skills for students with diverse background knowledge of English at Buddhist Colleges because some of them have had problems with reading comprehension since most reading passages usually comprise of relatively difficult vocabulary and language structures. Therefore, the students in this context need more teacher's attention to scaffold them to read English texts or passages concerning Dhamma comprehensibly and successfully by using the PSQ6R method. To scaffold students, English language teachers should assign students to work with reading texts in groups so that they will learn from their group members. At this stage, the teachers can provide assistance to students at a group level. After that, the teachers should encourage students to deal with reading texts individually, so the teacher can provide assistance to individual students. This way, students will be more confident in their ability to read English texts successfully. Therefore, from the findings, PSQ6R method might be an effective way to assist the undergraduates to read Dhamma texts in English because nine steps of the PSQ6R method provide students with opportunity to work with reading assignments meaningfully.

As for order thinking skills, it is evident from the present study results that the students' order thinking skills could be promoted using Bloom taxonomy as the students' score of reading comprehension and order thinking skill were higher than before learning. It is suggested that Bloom taxonomy can be used to gauge the students' order thinking

skills and assist students to read English texts critically. In practice, it is useful for English teachers to use Bloom taxonomy questions in designing exercises to help students develop their thinking skills through answering different order thinking skill questions. The teachers should firstly provide students with lower order thinking skill questions and later on move on to higher order thinking skill questions. As a result, the students will become more critical of what they are learning and they can eventually apply the order of thinking skills in their daily lives.

Conclusion

The findings obtained from this study may provide clearer views in classroom instruction by using EFL learners' PSQ6R reading strategies to help them overcome any difficulties they may experience when reading comprehension. In addition, the finding may also provide EFL teachers with clearer views of teaching reading positions in lecture classrooms to assist EFL learners when reading story or passage in English. This information may be helpful for EFL pedagogy, as it will include EFL reading comprehension technique in their EFL reading classrooms to improve the reading progress of their learners and provide useful EFL reading pedagogy by emphasizing reading process approach and social interactions to encourage development of L2 reading. However, more research is required to examine the effect of PSQ6R reading techniques across reading processes on other reading ability dimensions such as reading skills by using thought, analysis, and critique in a way that conflicts or renders with the author logically. Additionally, other research should be undertaken to investigate the possible effect that the PSQ6R reading technique may have on improving other language skills such as listening, writing, and speaking.

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