

# RESEARCH AND DEVELOPMENT OF READING LITERACY FOLLOW THE PISA TEST USING BY READING APPRENTICESHIP APPROACH

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## ABSTRACT

This study was a research and development. The purposes of this study were to, develop an instructional model based on Reading Apprenticeship Approach for enhancing reading literacy on Pisa of lower secondary school students; and evaluate the efficiency of the instructional model. The research procedure was divided into phases; 1) development of an instructional model based on real problem; and 2) effectiveness evaluation of an instructional model through implementation with the subjects who were thirty lower secondary school students, Rajavinit Mathayom school. The duration of experiment was one semester. The research instrument were reading literacy test. The data were analyzed by using T-test dependent and One-way analysis of variance with repeated measures. The research result show that: 1) the teaching stage, consisting of 4 sub stages which were 1. determining a reading issue from daily life 2. using a reading strategies 3. Interchanging knowledge 4. reflecting idea. 2)The effectiveness of the instructional model after implementation, it was found they; The subjects had the average score of reading literacy higher than the criterion score set at 70 percent and higher than before the experiment at .05 level of significance in all components.

**Keywords:** Reading Literacy, Reading Apprenticeship Approach

## INTRODUCTION

Reading is important skills and really essential for educational system that is the major part and tools of the world purpose for seeking the knowledge, ideas creation, decision making and solutions. In addition, reading can help learners to be quickly and widely in mindset of academic from both inside and beyond classrooms entirely. 80-90 percentages activity of academic institutes have concerned to the reading and learners who have its skillful to encourage as well as acquisition of knowledge. Otherwise reading can improve individual working competency and be required for the knowledge based society [1],[2].

UNESCO submitted the decade of literacy under slogan "Literacy as Freedom" that was literate or its freedom to various people from the freedom of unknown, poverty, sickness, etc. These literate people indicated, had literacy and bring to performance with freely live and improvement [3] by claim each country governments and reminding all society people to recognize in educational solution and increasing literacy target at 50 percentages by 2015 [3]. Because of literacy was the fundamental knowledge, was necessary in modernized society so that why each countries provided their population to have knowledge and literacy for changing society [4]. [5].

The important of literacy necessitates the fundamental skills for a person who would become a reading successor. The starting literacy was utilized for good reading skill including languages in writing and reading skill since childhood practice [6]. So, the person who had literacy would be reading literacy at the same time.

Although PISA was originally created by OECD governments, it has become a major assessment tool in many regions and countries around the world. The PISA concept of reading literacy emphasises the ability to use written information in situations that students may encounter in their life at and beyond school. PISA 2009 defines reading literacy as: understanding, using, reflecting on and engaging with written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society.

The reading was also an important factor in society development. It is a component of educational quality measurement that was the potential indicator for economic development. As Organization for Economic Cooperation and Development: OECD held the Program for International Student Assessment: PISA for indicating the future what students was currently learning in the school to be sufficient utilization for how the future live of students as literacy citizens. Another significant was indicated to national citizen's characteristic in the future competitive potential (Low or High).

PISA emphasized on assessing the competency of students to use the knowledge and skills in realistic facing rather than knowledge assessment from course syllabus in school, Currently, OECD/PISA called that competency was Literacy [2]. [6] that assessing framework of literacy measured for reading literacy, Mathematical and Science literacy. They were influencing factors to develop of both skills at home and school. Reading literacy was basic competency in developing to further Mathematical and Science Literacy [7].

In year 2009, Thailand was evaluated the reading literacy of Thai students at lower score than the international average 421 at tier 2 [2] meant the students were basic level of reading proficiency that could read and describe content when they were obviously direct meaning and citing summation or contrast or linkage to the low of existing knowledge. They were evaluated and analyzed as basic level.

The comparison between year 2000 and 2009 were emphasized to reading literacy. Its competency was inclining down and 43 percentages of students were below basic of reading literacy. Seeing regional scores were found that the students in Central, Lower Northeastern, Southern and Lower Northern were average of reading literacy at low level [2]. The Conclusion of knowledge and reading skill of students changed the direction to be unsatisfactory, because the total of low reading literacy students were marginal increased [2].

Therefore, the schooling management of Thai language would encourage Junior High School students to have reading literacy. According to it was a knowledge and understanding skills then using in daily life, reflecting and giving the suggestion in contents with engagement in its for targets approach of each people. To develop knowledge and self-competency and social contribution [2] the learners of Junior High School used reading to learn in their objectives with complex stories and specific interesting stories to encourage literacy in own academic contents [8].

The result of study from concepts, theories, principles of literature reviews and researches related to reading literacy enhancement showed that the theories might be able to utilize in fundamental schooling development so as to encourage reading literacy for the learners in Junior High School to be "Reading Apprenticeship Approach"

Therefore, the aim of this study is formulated as follows:

1. To develop an instructional model based on Reading Apprenticeship Approach for enhancing reading literacy on Pisa of lower secondary school students.
2. To evaluate the efficiency of the instructional model.

## **Literature Review**

### *Reading Literacy*

PISA (OECD, 2010: 37; 2012: 61) definition of reading literacy, each part of the definition is explained further:

1. Understanding refers to the ability to gain meaning from what is read. This can include the meaning of words or it can be more complex in identifying the underlying theme of a narrative.
2. Using relates to the notions of application and function (i.e. applying what has been read to an immediate task or goal, or using what is read to reinforce or change beliefs).
3. Reflecting on emphasises the notion that reading is interactive, where readers make connections with their own thoughts and experiences when engaging with a text.

4. Engaging with involves the reader's motivation to read and is comprised of constructs including interest in and enjoyment of reading, a sense of control over what one reads, and reading practices.

5. Written texts includes texts from a variety of media –hand-written, printed and digital. They can include visual displays such as diagrams and pictures. Written texts can be in a variety of formats, including continuous and non-continuous, and in a variety of text types, such as narrative and expositons.

In order to achieve one's goals, to develop one's knowledge and potential, and to participate in society – this statement is intended to capture the full scope of situations in which reading literacy plays a role. To achieve one's goals and to develop one's knowledge and potential refers to the idea that reading literacy enables the fulfillment of individual aspirations. The word participate is used because it implies that reading literacy allows people to contribute to society as well as to meet their own needs. [2].

Therefore reading literacy development for the learners, teachers needed to focus on the development of the learners in reading skill for understanding and engagement resulted to the objective of learners and good reading habit [9].

#### *Reading apprenticeship approach*

Reading Apprenticeship Approach was applied by fundamental of Social Constructivism and Social Cognitive Learning Theory. The major character of this concept was teachers, experts and friends to be practice guideline for the process of reading in various types [10]. Role of teachers was the original various systematic applications with extra practice and encouraged the learners to control self-systematic reading Knowledge acquisition was based on Metacognition Conversation how to choose the context and ensure comprehension while reading and evaluating the knowledge outcome, jobs assignment and appropriate reading system for complex contents [11]. The prior reading experiences of learners helped the understanding of content (Brenner, 2009). Learning was emphasized with interaction between learners, teachers and colleagues by group-knowledge sharing, independent group assignment namely pairs, small group, classroom debate and conclusion together [10].

Moreover, Reading Apprenticeship Approach was the original pattern for all writing styles, reading development for all educational levels, and capability encouragement to utilize the various reading methods to concern with the contents. Reader could understand and gather from the main idea of contents. Otherwise it acquired skills of thinking and knowledge to extend for higher education and self-access. This method of reading raised teamwork and motivated all learners. As noticed, the Reading Apprenticeship Approach emphasized to understand and gather from the main ideas conforming to Pressley et al., [12] stated "General researchers did not study for the method of interpretation, but focusing on the main ideas and raising readers competency. The learners' interpretation happened during achievement test, which was provided by their teachers, because learners' interpretive capability was from their knowledge basis, attitude, ideas and method of reading entirely to explain vocabulary, idioms and context. They were shown by interaction between teachers, learners and text" In addition, Johnson Pittelman and Heimlich [13] stated that most researchers aimed to reading comprehension, not in details of words. In fact, words were important components of reading and its interpretation from the meaning.

Therefore, the important guideline for learners to have ability of reading analysis and to know meaning of word for interpretation was Semantic Mapping Strategy.

Based on this explanation, the hypothesis 1 is defined as follows:

H1: The effectiveness of the instructional model after implementation the average score of reading literacy higher than the criterion score set at 70 percent

H2: The average score of reading literacy higher than before the experiment at .05 level of significance in all components.

## **METHODOLOGY**

This study was a research and development. The purposes of this study were to, develop an instructional model based on schema theory and cooperative learning for enhancing reading literacy on Pisa of lower secondary school students; and evaluate the efficiency of the instructional model. The research procedure was divided into phases; 1) development of an instructional model based on real problem; and 2) effectiveness evaluation of an instructional model through implementation with the subjects who were thirty lower secondary school students, Rajavinit Mathayom school. They learn Reading subject (T1202).

The information of research was reading content in the category of Thai literacy for Junior High School grade 1 that was concerned with passage, announcement board, literature, chart tables. Their reading contents were from interesting and requirement of the learners contained in the Education Program.

The duration of experiment was one semester 16 weeks in 2016-2017. The research instrument were reading literacy test apply from PISA [2]. The data were analyzed by using T-test dependent and One-way analysis of variance with repeated measures.

## RESULTS

The instructional model by integrating Reading Apprenticeship Approach had 4 teaching stages which were:

1. determining a reading issue from daily life
2. using a reading strategies
3. interchanging knowledge
4. reflecting idea.

### Part 1 Quality Inspection of schooling by experiment

The results of schooling model to experiment with Junior High School Grade 1at Wat Benchamabopit School total 30 students, they were as similar as the sample group in final semester year 2016 as following;

First experiment was found that the learners could not reflect ideas from reading contents and explain its content to apply reasonably. The researchers demonstrated conceptual reflection samples and brought ideas from reading contents to apply with the learners by using the technical questions so as to encourage the learners to think and make reasonable decision for some information properly.

Second experiment was found that the learners could reflect the ideas from reading contents. Nevertheless, the process of knowledge relaying, various learners could not bring the knowledge from reading contents to use appropriately. The researchers used a teaching by rising up the sample situations related to the reading contents and asking learners to analyze the issues with suggestion.

The result of teaching experiment was taken to enhance literacy management plan of sample group.

### Part 2 The effectiveness of the instructional model by integrating Reading Apprenticeship Approach

**Table 1**  
**The comparison result of average score in reading literacy against the sample before and after the experiment (N = 30)**

Reading Literacy	Pretest		Posttest		D	T	P
	$\bar{x}$	S.D.	$\bar{x}$	S.D.			
Reading Literacy (50)	29.63	3.362	37.30	3.030	7.67	-10.884	.000*

\*p < .05

As table 1 found that after experiment of the sample group had overall reading literacy higher than before the experiment at .05 level of significant. Score of before experiment at 29.63 and score of after experiment was increased at 37.30

**Table 2**  
**The comparison result of average score in reading literacy against before and after the experiment categorized by component (N = 30)**

Reading Literacy	Pre test		Post test		t	p
	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
1.understading (8)	3.06	0.827	3.46	0.681	1.934	.063
2. using (7)	3.86	1.105	5.66	1.268	5.835	.000*
3. reflecting (8)	4.93	1.172	4.40	1.275	1.915	.065
4. engagement (7)	2.70	0.749	2.83	0.791	0.643	.526
reading literacy(30)	14.56	2.062	16.36	2.606	3.366	.002*

\*p < .05

As table 2 found that after the experiment to the sample group had overall reading literacy higher than criteria at .05 levels. The average score of understanding, using, and engagement were higher than before the experiment at .05 level of significant. The reflection of sample group had score higher than before the experiment, but not different at 0.05 level of significant.

### CONCLUSION AND FUTURE WORK

The research of Schema Theory found that reading guidance assisted the learners understanding of what they read including used the knowledge and relayed its correctly on objective.[14].Meanwhile Schema Theory with Cooperative Learning assisted all learners having motivation with reading habit, and engagement.[15],[16].The results of research in Reading Apprenticeship Approach assisted enhancement of reading for understanding. Students, who practiced on that theory, could understand and penetrate the main point of the contents. Moreover they could link and well relay on the reading [17].

The Literacy Management Cooperation assisted enhancement the reading for understanding, attitude and motivation for Junior High School [18].

The population of this study was 30 students from lower secondary school. Findings were average score of reading literacy higher than before the experiment at .05 level of significance in all components. The teaching stage were 1.determining a reading issue from daily life 2.using a reading strategies 3.interchanging knowledge 4.reflecting idea. Students who were participant, provided activities and enjoyable learning. Students had reading skills performed best on the Reading Literacy Test.

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