The Development of Ability on English Reading and Writing for the 6th Years Class of Secondary Level by Using Directed Reading-Thinking Activity Model Together With Learning Performance on Brain Based Learning

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Abstracts

This study compares the English reading and writing abilities of twelfth grade students using the DR-TA strategy in combination with brain-based activities and learning management. This research was classified as experimental research and used a quasi-experimental design. This study involved fifty twelfth grade students at Assumption College, Samutprakarn. A randomized control group pretest-posttest was designed and the data analysis used a t-test for the dependent samples. The satisfaction questionnaire of students was used with the DR-TA strategy, in combination with brain-based activities and learning management. The results had a significant effect on English reading and writing by using the DR-TA strategy in combination with brain-based activities to the learning management of the experimental group had a mean score in terms of comparison. The mean score for reading was 10.28 and the posttest showed an increase to 15.04, the mean score for writing was 11.28, and the posttest showed an increase to 15.36 at a statistically significant level of .05. The experimental group was satisfied with the learning management model. The experimental group used the DR-TA strategy in combination with brain-based activities to learning management and satisfaction was at the highest level (4.62). Therefore, the hypothesis was accepted, which means that the DR-TA strategy in combination with brain-based activities to learning management had a significant effect on the reading and writing skills of the students.

Keywords: Directed Reading-Thinking Activity; Concept-based instruction

Introduction

Based on research while teaching English in Thailand, the researcher found that most teachers use a learning management model that does not encourage students to use appropriate reading techniques. Teachers focus on teaching English grammatical structures. There are few activities to teach reading skills. This is the reason why learners have limited vocabulary knowledge. The researcher studied documents and research related to the teaching style of English reading. In order to improve the students' reading ability, it was found that the DR-TA (Direct Reading – Thinking Activity) teaching style was an interesting reading teaching model. Teaching reading DR-TA is a teaching method that focuses on making students guess the story

in advance. Staffer (Stauffer,1955 : 43) created the image, title, and context, which Terney et al. revised. It develops students' interest in learning with a focus on the thinking process, which is linked to the learners' previous knowledge and experiences. Emphasis is placed on developing reading, thinking, and analytical skills in order to build reading ability for learners to have more accurate and accurate reading skills.

Teaching English through reading DR-TA encourages learners to practice thinking, analytical and predictive skills in the text as they relate their prior knowledge and experiences to the text they read. But teaching reading skills in this style alone can make learners feel bored. Therefore, the researcher studied additional documents and research related to English learning activities and found that Brain-based Learning Activity is another strategy that encourages learners. Practice thinking, analytical skills, and be able to find answers from the passages read along with a variety of learning activities. Brain-Based Learning Management Caine et al. (Colleen, 2006 : 189-90) conceptualized 12 brain-based learning activities, and Jensen (Jensen, 2008 : 32) sequenced the organization of brain-based learning activities. Brain-based learning activities are based on 7 steps. Brain-based learning management is therefore a concept that focuses on teaching teachers to understand how to design learning management. appropriate to learners' learning (Harley, 2010 : 54).

Writing skills were another issue that the researcher encountered while teaching English subjects. This is an important skill that learners must develop in order to communicate effectively in English. Thoughts, feelings, and imaginations of readers are conveyed while reading. This is an important skill that must be learned and practiced. Reading and writing abilities It is crucial in assisting learners to improve their English proficiency. If knowledge is continuously transferred and practiced. The grammar and vocabulary (Vocabulary) consistent with Valentina's research (Khrabrova Valentina, 2016 : 4) discovered that most English as a second language learners lacked. As a result, they are unable to express themselves in writing. English language learning management focuses solely on students learning sentence construction. Students are unaware of the fundamentals of proper writing. Most teachers are still unaware of the importance of students' ability to write in English.

Due to the aforementioned issues. As a result, the researcher considers developing English reading and writing abilities by combining the DR-TA model with brain-based learning management. It will assist students' reading comprehension. Analyze the content and respond to the questions posed by the stories you've read. To comprehend, you must be able to read English. Collect information from the story to convey through writing. to convey students' ideas and imaginations through a systematic thought process, and to have a positive attitude toward English learning management

The researcher is thinking about how to improve English reading and writing skills by combining the DR-TA model with brain-based learning management. It will help students understand what they are reading. Analyze the content and answer the questions raised by the stories you've read. You must be able to read English in order to understand. Gather information

from the story to convey in writing to effectively communicate students' ideas and imaginations through a systematic thought process, and to have a positive attitude toward English learning management. As a result, students' reading and writing skills improve. Students should practice and improve their English language skills so that they can use them effectively in everyday situations. All aspects of communication skills must be covered. All of these are principles and requirements that students should strive for. By employing an efficient and effective language teaching and learning process (Jansem, 2016 : 114-123), as well as using it as a tool and a process for information management and thinking development. Language integration is accomplished through the teaching of reading and writing. It will aid in the development of learners' knowledge and skills in the reading for meaning, reading summary, and reading interpretation processes. as well as having knowledge of writing to convey meaning in order to convey ideas more effectively. This is consistent with the findings of reading instruction using the DR-TA model. and English writing development (Promnont, 2015 : online;) found that a majority of students had improved their ability to read and write in English. Students think in a systematic manner. The knowledge gained from teaching reading and writing can also be used to practice and improve your ability to communicate effectively in English. It also fosters a positive attitude toward English learning among students. and pleased with the learning management system in this manner.

Research Objectives

1) To study 12th grade students' reading and writing ability, compare between pretest-posttest experiment.

2) To study 12th grade students' satisfaction with learning through Directed Reading Thinking Activity (DR-TA) and Brain-Based Learning activities to learning management.

Research Methodology

In the study, the researcher attempts to study the effects of secondary 6 students' studying reading, writing abilities, and satisfaction in learning when taught through Directed Reading Thinking Activity and Brain-Based Learning activities to learning management. The research procedures follow.

3.1 Identify Subsections

The development of 12th grade students' English reading and writing skills using Directed Reading Thinking Activity and Brain-Based Learning activities to learning management. A conceptual framework has been established by the researcher. from the study of documents, principles, theories, and related research focusing on the principles of teaching reading and teaching writing to be used in English language learning management. Emphasis on the student experience Develop students' ability to manage and think critically. The nature of perception and the process of language learning are emphasized, and understanding the differences among individual learners Manage learning based on systematic linguistics, psychological linguistics. (Psychological Linguistic) and the learner's experience.

3.2 Sampling Procedures

An experimental research design with a randomized pretest-posttest sample group design was used to examine the accuracy of the study's conceptual model in order to achieve the study's objective. The participants in this study were 12th grade students (n = 50) enrolled in the English language course (reading-writing) in the first semester of the academic year 2021 at Assumption College Samutprakarn, Thailand. The experimental group was drawn from a Cluster-Random Sampling.

3.3 Data Analysis

The data was analyzed by the researcher using a software program to calculate various statistical values, as follows:

1) Determine the average (mean) of the reading and writing ability score. Learning through the Directed Reading Thinking Activity (DR-TA) and Brain-Based Learning activities to learning management.

2) Find the standard deviation (S.D.) reading and writing ability scores.

3) Using t-test Dependent Samples statistics to determine the difference in student mean scores between pretest and posttest.
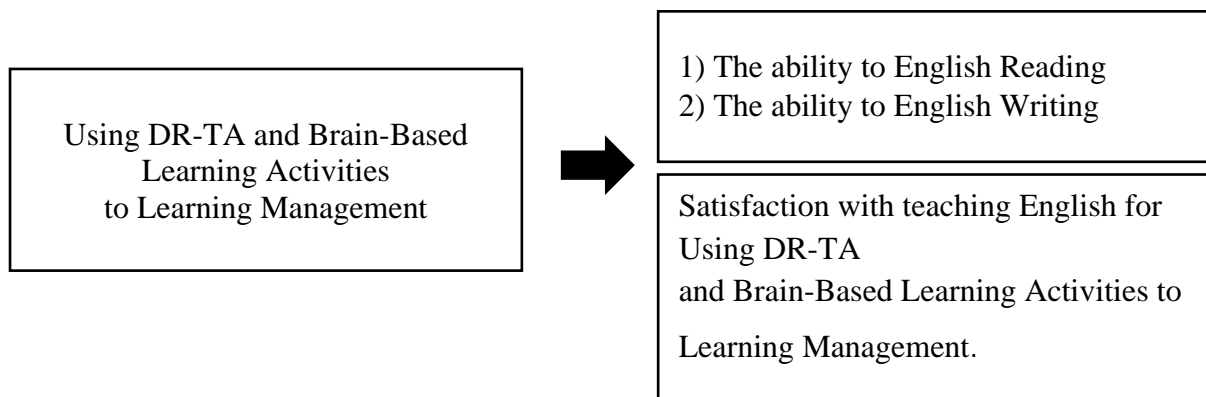
Research conceptual framework

Figure 1 Research Conceptual Framework

Results

The results of the study correspond to the research questions as follows;

1) To study 12th grade students' reading and writing ability, compare between pretest-posttest experiment.

1.1) Compare the results of the English Reading test before and after the sample experiment. Analyze and compare the difference in scores using dependent sample t-test Dependent Samples statistics using a software program. As can be seen in Table 1.

Table 1. The result of 12th grade students' English reading ability was compared before and after the experiment using the DR-TA model and brain-based learning management.

Score	N	$\bar{x}$	S.D.	t	df	sig.
Pretest	50	10.28	4.116	16.697*	49	0.000
Posttest	50	15.04	3.220			

According to the data in Table 1. It was discovered that after the experiment, the students in the sample group had a statistically significantly higher score than before. The experimental group has an average pretest score of 10.28 and a posttest score of 15.04 at the .05 level.

1.2) Compare the results of the English Writing test before and after the sample experiment. Analyze and compare the difference in scores using dependent sample *t*-test Dependent Samples statistics using a software program. As can be seen in Table 2.

Table 2. The result of 12th grade students' English writing ability was compared before and after the experiment using the DR-TA model and brain-based learning management.

Score	N	$\bar{x}$	S.D.	t	df	sig.
Pretest	50	11.28	2.718	15.324*	49	0.000
Posttest	50	15.36	2.961			

According to the data in Table 2. It was discovered that after the experiment, the students in the sample group had a statistically significantly higher score than before. The experimental group has an average pretest score of 11.28 and a posttest score of 15.36 at the .05 level.

2) To study 12th grade students' satisfaction with learning through Directed Reading Thinking Activity (DR-TA) and Brain-Based Learning activities to learning management.
2.1) The Analysis of basic statistical data in the experimental group's satisfaction on learning through the development of 12th grade student's reading, English writing using Directed Reading Thinking Activity (DR-TA) and Brain-Based Learning activities to learning management.
The results of the students' satisfaction were based on a five-point Likert scale, with the criteria as follows:

4.51–5.00   strongly agree

3.51–4.50   agree

2.51–3.50   neutral

1.51–2.50   disagree

1.00–1.50   strongly disagree

Content analysis was used to analyze data collected from the open-ended questions. Results of the students' needs analysis were interpreted and transferred into the course content, media and materials, teaching strategies and learning activities.

Table 3. Analysis of basic statistical data in the experimental group's satisfaction.

No.	Satisfaction	$\bar{x}$	S.D.	Interpretation
1.	The process of learning management It's fresh and intriguing, and it never fails to pique my interest.	4.72	0.81	strongly agree
2.	The teacher's content organization made it simple for me to understand the lesson.	4.46	0.68	agree
3.	Interesting content that is not too difficult to understand and can be applied in daily life.	4.66	0.63	strongly agree
4.	The teacher provides concise explanations with well-illustrated examples.	4.58	0.61	strongly agree
5.	It is appropriate to use teaching materials and equipment. interesting and motivates me to learn the lesson faster.	4.32	1.04	agree
6.	Learning management has a friendly, fun, and non-boring atmosphere.	4.84	0.37	strongly agree
7.	The Development of 12th grade student's Reading, English Writing Using Direct Reading Thinking Activity and Brain-Based Learning activities to learning management has piqued my interest.	4.42	0.76	agree
8.	The Development of 12th grade student's Reading, English Writing Using Direct Reading Thinking Activity and Brain-Based Learning activities to learning management that trains to think, analyze, solve problems and promote creativity.	4.42	0.78	agree

No.	Satisfaction	$\bar{x}$	S.D.	Interpretation
9.	Learning management activities have pushed me to improve all four skills: listening, speaking, reading, and writing.	4.44	0.79	agree
10.	I have practiced learning management activities on my own.	4.88	0.33	strongly agree
11.	I've honed my learning, vocabulary, idioms, and writing skills.	4.66	0.63	strongly agree
12.	Activities for managing English learning Make me something modern, up-to-date, and useful in my daily life.	4.88	0.33	strongly agree
13.	Activities for managing English learning It will be useful in my future career.	4.86	0.35	strongly agree
14.	There are steps that helped me to resolve the issue myself.	4.40	0.83	agree
15.	I am satisfied with the development of 12th grade student's reading, English writing using direct reading thinking activity and brain-based learning activities to learning management.	4.82	0.48	strongly agree
	Total	4.62	0.33	strongly agree

The students who received the experimental experience were the most satisfied. The average scores of student satisfaction in each sub-item ranged from 4.21 to 5.00, with a standard deviation of 0.33 to 1.04, including a mean score of 4.62 and a total mean of 0.33 standard deviations. Using the satisfaction score interpretation criteria, it was determined that satisfaction was at the highest level, on all issues and overall.

Discussion

The study results are applicable to the teaching of English language reading and writing through Directed Reading Thinking Activity (DR-TA) and Brain-Based Learning activities to learning management.

The experimental group significantly outperforms the controlled experiment in reading, writing, and student learning satisfaction. This study's findings may be attributed to the fact that 12th grade students have significantly more English development, particularly in reading and writing skills. Prior to conducting the experiment, the researcher was familiar with learning management, learning objectives, measurement, and evaluation. To teach students about learning management, reading, and writing so that they have knowledge comprehension of reading's meaning, characteristics, and elements Reading comprehension requires the ability to comprehend, guess, interpret, and draw conclusions. It can be summarized as a concept in which people exchange ideas and express their own opinions in the form of writing in order to better convey meaning.

Students are likely to benefit from the Directed Reading Thinking Activity (DR-TA) and Brain-Based Learning activities to learning management when using the Learning Management Plan. The results were as follows:

1) Directing The Reading-Thinking Process

The Directed Reading – Thinking Activity (DR-TA) teaching method emphasizes reading by connecting students' prior knowledge or experiences. Before reading, students guessed the content. Students can relate to learning by drawing on prior experiences to guess or predict what will happen in the story and then carefully read to confirm that guess, collecting various information and distinguishing facts or evaluating various situations in the story, and enjoying the experience of remembering what to read.

Based on observations, the students were interested in the media that was introduced into the lesson, such as video media, sample pictures, and hints on vocabulary related to the story. Students will learn more about the story if they make educated guesses about it. The students discussed with their peers whether they met their expectations in order to establish the purpose of reading. Goals can be set by some students who have had similar experiences or stories to the text in the text. Predict more accurately than students who have no prior knowledge of the subject matter.

Students skim a short story for words they don't know the meaning of or sentences they don't understand. It is the teacher's responsibility to explain the meaning or make an educated guess. When students comprehend the meaning of words that they do not already comprehend. Students in the story can make more predictions about the story. Many students were able to answer the researcher's questions in order to enter the lesson more accurately and quickly, according to the researcher. This is consistent with the experience-based learning management process, which is necessary for learning. Students should be allowed to observe, review, and consider what happened until they can create concepts or assumptions about the previously learned subject, then apply those ideas or assumptions to experiment or apply in new situations. (Tissana, 2018 : 131-135)

Students have been able to comprehend passages more quickly. Some aspects of knowing the words have already been figured out by the students. Students can provide an answer to the question, "What does it mean?" Furthermore, by observing different types of words and inferring from context, students can explain grammatical structures. Increase the variety of learning activities available to students.

2) Fundamental Skill Training

The researcher planned a question-and-answer session. By utilizing online game media to help create a more enjoyable learning environment. The researcher discovered that students are interested in answering questions by creating questions from a set of exercises for each group of students to work together to find answers at this stage. as well as cooperating within their own groups.

Following that, the activities required students to exchange ideas and answer questions. How to evaluate reading comprehension. The researcher requested that the students create a mind map to summarize their own reading comprehension and write more comments on their own ideas. The researcher asked the students to write between 50 to 100 words. Students' writing abilities increased progressively after multiple writing practice sessions, according to the study. In addition, their writing is evaluated in order to assist in the evaluation of students' writing at this stage. The researcher encouraged the students to continue exchanging ideas with their classmates. By utilizing online media to assist in the organization

of more diverse learning activities. Students are free to ask whatever questions they want based on their own ideas.

From the discussion of this result, the development of 12th grade students' English reading and writing using direct reading thinking activity and brain-based learning activities to learning management. It can be explained that encouraging students in improving their reading ability. Based on a working knowledge of the basics of reading. Reading contains a crucial component that will help the reader read more quickly. The reader must have some prior knowledge and experience with the material they are about to read (Schema). To understand the link between words and their meanings, the reader must apply the process of analyzing the text (Text Schema) in reading, as well as knowledge of the language (Linguistic Knowledge). When readers put forth the effort to develop their abilities. Students' reading abilities, as well as their writing skills, will increase as a result of this learning. Students can analyze language structure characteristics (Schematic Structure), learn vocabulary (Vocabulary), and improve their understanding of how to use written language. Students can make goals for themselves or better plan their writing. (Horadee, 2014 : online; Promnont, 2015 : online; Jindarat, 2019 : 33-36)

As previously read the material, words, sentences, and expressions are presented to students in the form of learning management tasks, their writing skills will improve. It is critical to teach writing skills for communication. Writing from one's own ideas can help a student improve English writing skills. As a result, English instruction must be supplemented with other skills. In addition to writing instruction, the researcher decided to include reading instruction. Reading and writing instruction are inextricably linked. Reading and writing can both improve at the same time, according to previous research, and encourage students to use English to improve their communication skills.

Suggestion

1. Suggestions instead of learning management.

1.1 Teaching and learning must be organized in an online style due to the pandemic situation of the coronavirus disease 2019 (Covid-19). Content selection for online teaching. Teachers should choose a narrative that isn't too long and is either something students have seen or something they are familiar with. Learning management that would be both time-appropriate and online.

1.2 Teachers should set up the learning environment that is conducive to online instruction. Encourage students to participate in online classrooms as much as possible by using relevant instructional materials such as video media, online games, online assessment, and so on.

1.3 Students should be encouraged to ask and answer questions. Discuss any ideas with the classmates. Where the teacher supervises the class encourage students to participate in group activities.

1.4 Allow students to use technology to assist them in their learning. They may instruct students to conduct extra research on the learning topic. Find out what statement implies.

1.5 Choose modern learning activities that correspond to English language learning management courses, such as news, current events, or a reading from a well-known novel to engage students' attention.

2. Suggestion for this research.

　　2.1 Experiment with additional groups of students using the learning management plan to investigate a wider range of research findings.

　　2.2 Teaching reading and writing using the DR-TA (Directed Reading - Thinking Activity) approach in combination with Brain Based Learning and other teaching methodologies. To investigate which teaching techniques or procedures may enable students to become more successful learners.

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