Effects of Business Reading Model on Thai Learners' Reading and Creative Thinking Abilities

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Abstract

In second language research, reading has attracted the attention of numerous researchers. However, little has been carried out to investigate effects of a reading instructional model on Thai learners' business reading and creative thinking abilities. Thus, this study investigates whether a business reading model designed based on Concept-Oriented Reading Instruction (CORI) and Project-Based Learning (PBL) enhances Thai undergraduates' reading and creative thinking abilities. The study also investigates what reading strategies the students use frequently to improve their reading abilities. Based on pretest-posttest design, this study measured 35 undergraduates' reading abilities and strategies through a reading comprehension test. Additionally, a mini project was assigned to gauge the students' creative thinking abilities following the treatment. The findings demonstrate that the business reading model significantly increased the participants' reading abilities and helped promote their creative thinking abilities. It is also discovered that the top three reading strategies these students used frequently to increase their reading abilities include finding the main idea, taking notes, and mapping the concept and integrating information. The study concludes by providing useful insights for researchers or educators who are interested in business English reading instruction. Pedagogical recommendations for further studies are also offered in this study.

Keywords: Concept-Oriented Reading Instruction (CORI), Project-Based Learning (PBL), reading strategies, English reading, creative thinking, Thai learners

1. Introduction

English reading is an essential skill for learners of all ages (Winskel, 2020). Reading serves as the key to developing second language reading fluency and grammatical knowledge (Stoeckel, Reagan, & Hann, 2012). It also aids readers in building their good reading habits, boosting knowledge of vocabulary, and encouraging a liking for enjoyment (Bamford & Day, 2004). Within the Thailand context, previous evidence, however, shows that reading is considered challenging among Thai learners. That is, most Thai learners have difficulty comprehending English texts (Akkakoson & Setobol, 2009). There are various kinds of factors affecting Thai students' reading abilities such as a lack of reading for enjoyment and of reading attainment (Boonaree, Goulding, & Calvert, 2017). Ngamwittayaphong (2010) further adds that there lacks a reading culture that motivates Thai learners to read fluently and proficiently. There have been research contributions made to tackle such reading problems (e.g., Chatpunnarangsee & Pookcharoen, 2013; Pookcharoen, 2016).

However, relevant research focusing on the Concept-Oriented Reading Instruction (henceforth CORI) integrated with Project-Based Learning (PBL) is limited. It is also found that little research is oriented toward fostering English learners' reading strategies in the business context and making use of conceptual knowledge (the concept of CORI) in reading to create a project (the concept of PBL). In this study, the target instructional model is coined as AMARA Model, an acronym for **a**ctivating students' background knowledge (A), **m**otivating students' reading (M), **a**ction-taking (A), **r**unning a project and making presentations (R), and **a**ssessments (A) (see Phase 3: Research 2 (R2: Implementation for further details). Designed quasi-experimentally, the current study first aims to investigate effects of the AMARA Model developed based on CORI and PBL on Thai undergraduates' reading abilities and reading strategies. Also, the goal of this study is to investigate whether the AMARA Model helps promote the students' creative thinking abilities. The results gained from this study would

help throw some light on the teaching of reading in general and business English reading in particular. Simply put, the results of this study will certainly provide teachers or researchers with useful insights into how to train students in developing their reading strategies. The study would also provide useful guidelines on how to conduct effective business reading classes and design effective business reading materials that aid in motivating students to read more fluently and proficiently as well as in using concepts and creativity during the reading process to create projects.

2. Current Study

The present study aims to answer the following research questions and hypotheses.

1. Does the use of the business reading instructional model (the AMARA Model) have a significant impact on Thai students' reading abilities?

Under this question, it is hypothesized that post-test scores obtained from the use of the AMARA Model are significantly higher than their pre-test scores.

2. What reading strategies after the implementation of the AMARA Model do the students use to show the improvement on their reading abilities?

3. Does the AMARA Model help promote the students' creative thinking abilities?

Regarding this question, it is hypothesized that the AMARA Model promotes the students' creative thinking skills. Under investigation, a five-point Likert scale (represented as Very High, High, Average, Low, and Very Low) is employed to answer this question. Only scores which are under the Very High scale are used to ensure that the AMARA Model helps to promote the students' creative thinking skills.

3. Literature Review

The main purpose of this study is to assess effects of the AMARA Model on Thai learners' reading abilities in the business English context. Another aim is to examine what target reading strategies these students use to improve their reading abilities. Finally, this study aims to investigate whether the AMARA Model helps promote the students' creative thinking skills through creating a mini project.

In this study, the AMARA Model is developed on the basis of two concepts that are explicitly discussed as follows.

3.1 Concept-Oriented Reading Instruction (CORI) and Project-Based Learning (PBL)

3.1.1 Concept-Oriented Reading Instruction (CORI)

In a plethora of second language studies, CORI has been implemented as a tool to scaffold learners' reading abilities. Within the context of Thailand, however, a few studies have focused on effects of a business reading instructional model integrated with CORI and PBL on learners' abilities in reading business English. For this reason, the current study intends to develop a business reading model using CORI and PBL (explicitly elucidated in 3.1.2). The main aim of the new model of reading instruction is to determine its effects on Thai learners' business English reading abilities, reading strategies, and creative thinking abilities.

In second language research, CORI has been defined by a number of scholars. As initially coined by Guthrie and Wigfield (2000), CORI is an approach used to increase learners' reading engagement, use of reading strategies, and motivation in reading. McNamara (2010) also defines CORI as an instructional model that combines conceptual themes with teaching reading. In teaching business reading, a teacher may choose a marketing plan as a conceptual theme to enhance students' reading abilities. As McNamara states, the purpose of CORI is to increase students' motivation in reading as well. As defined by Swan (2003), CORI serves as an approach that focuses on curriculum and instruction. This approach is a life-long process that combines reading skills and strategies, knowledge, motivation, and social collaboration. That is, it aims to enable students to gain more knowledge about particular contents. Also, Grabe and Stoller (2011) regard CORI as Content-Based Instruction (CBI). By definition, CBI means an approach to an instruction in which non-language subject matter is taught through language. CORI is thus an instructional approach that focuses on language learning and content learning. In this study, the concept of CORI is applied to teaching business reading that engages and motivates learners to read. It also promotes learners to use reading strategies to improve their reading abilities.

3.1.2 Project-Based Learning (PBL)

In the relevant literature, PBL has been defined by many scholars as a supplement and integration between language learning and content learning. According to Stoller (1997), PBL is considered as a progressive option used in various branches of English Language Teaching (ELT), which comprises general English, English for

academic purposes, English for specific purposes, and English for occupational/vocational/professional purposes. Atkinson (2001) pointed out that PBL is an approach that leads to the achievement through the formation of people into groups for sharing mutual responsibility. Zafirov (2013) added that this kind of approach is like a teaching/learning model that involves students in problem-solving tasks, allows students to actively build and manage their own learning, and results in students-built realistic deliverables. Shortly this is an instructional model that involves students in investigations of compelling problems that culminate in authentic products. However, Duffy and Cunningham (1996) cited in Tamim and Grant (2013) elaborated the definition of Project-Based Learning as an instructional model that is based in the constructivist approach to learning, which entails the construction of knowledge with multiple perspectives, within a social activity, and allows for self-awareness of learning and knowing while being context dependent.

In this study, PBL is defined as an approach that is used in teaching and learning English business reading. PBL enables learners to deal with the learning process and to construct their own knowledge through the constructivist approach.

3.2 Related Literature

This study aims to see whether the AMARA Model developed based on CORI and PBL produces a positive impact on Thai learners' reading abilities and creative thinking abilities. The literature section thus discusses previous studies regarding effects of CORI on learners' reading abilities. The section then discusses past studies concerning using reading strategies to foster learners' reading abilities. Next, it provides a discussion of earlier studies regarding PBL. The section ends with a discussion of previous studies on learners' creative thinking abilities.

3.2.1 Concept-Oriented Reading Instruction (CORI)

Under this section, studies involving effects of CORI on learners' reading abilities are reviewed.

Many studies regarding CORI have been investigated to develop students' reading abilities. For example, Fannin (2011) investigated whether CORI improved reading proficiency levels among elementary students. In this study, CORI was designed based on science content which served as a conceptual theme to promote the students' reading abilities. Based on pretest and posttest design, the study used interactive classroom activities to facilitate the students' reading abilities. The results showed that the students' reading abilities significantly improved after the treatment.

In addition, Azis (2015) determined whether CORI served as a promising instructional model to enhance students' reading comprehension. A reading comprehension test was administered to gather quantitative data from the students. In this study, qualitative data included observation sheets, field notes, and interviews. The findings of this study revealed that CORI helped increase the students' reading abilities significantly.

Guthrie, Bennett, and McGough (1994) investigated effects of CORI on fifth-grade students' reading motivation and reading strategies. In this study, five stages were taken to develop a CORI-based model. These stages included observing and personalizing, searching and retrieving, comprehending and integrating, communicating with others, and interacting with peers to construct meaning. Participants were divided into an experimental group and a control group. Under investigation, the CORI-based instruction was implemented for four months. The results gained from the posttest showed that the experimental group demonstrated their reading abilities more effectively than did the control group. It was also revealed that the CORI-based model played a key role in improving the students' reading motivation.

Another seminal study conducted by Guthrie et al. (1998) provides strong support for the effectiveness of CORI. In the study, they investigated whether reading engagement would enhance students' use of reading strategies and reading motivation. Under investigation, the CORI model was designed dependent on English reading and science content. Two groups of sixth and fifth graders: experimental and control groups took part in this research. Research evidence showed that the CORI instructional model helped enhance the students' reading abilities. Furthermore, it was found that the students employed prior knowledge as an outstanding reading strategy to improve their reading abilities and reading motivation.

In short, CORI has been adapted as an instructional model in teaching reading. Within CORI, students are engaged to use reading strategies to improve their reading abilities. CORI also motivates students to use conceptual themes to create a project.

3.2.2 Reading Strategies

Under this subheading, types of reading strategies are reviewed.

According to Yimwilai (2008), reading strategies involve finding the topic, finding the main idea, finding details, finding referring, guessing meanings from contexts, identifying purposes, and identifying meanings of sentences. Grabe and Stoller (2011) propose two types of reading strategies: background knowledge and questioning as well as searching texts for information. O'Hara (2007) further adds that there are two reading strategies which include graphically organizing information/integrating information through graphic organizers and summarizing texts. As proposed by Grabe and Stoller (2011) reading strategies involve forming questions, noting text structure and text characteristics, answering questions, taking notes, determining main ideas, synthesizing information, paraphrasing, monitoring and repairing comprehension, and carrying out a range of project tasks.

As discussed, there are two components involved in teaching reading. The first component deals with enabling students to use target reading strategies, while the second involves encouraging them to do a project. This study thus considers such a guiding principle in developing its business reading instructional model.

In second language research, many researchers used various types of reading strategies to enhance learners' reading abilities. For example, Echeverri and Ferri (2010) used reading strategies including 1) activating students' background knowledge, 2) having them make predictions, 3) completing graphic organizers, and 4) answering questions to promote students' reading abilities. Also, Kucukoglu (2013) employed various kinds of reading strategies to improve students' reading comprehension. Targeted in the study, there were six kinds of reading strategies: 1) predicting, 2) making connections, 3) visualizing, 4) inferring, 5) questioning, and 6) summarizing. In their study, Soleimani and Hajghani (2013) used the following reading strategies to promote their students' reading comprehension: 1) reading text once, 2) reading text twice, 3) reading the first line of a paragraph, 4) using titles to predict text content, 5) using illustrations to understand content, 6) reading questions first, 7) using the teacher's introduction to understand content, 8) guessing meanings based on cognates in English, 9) guessing meaning based on similarity to other words, 10) guessing meanings from context, 11) using dictionaries, and 12) writing main points in one's own words. Of this study, reading strategies that involve 1) using context clues, 2) finding the main ideas, 3) rereading for clarification, 4) making inferences, 5) taking notes, 6) identifying text structure, 7) making predictions, 9) making summaries, and 10) mapping concepts are the main focus.

3.2.3 Project-Based Learning (PBL)

Many researchers studied on Project-Based Learning which was integrated with language instruction to gain conceptual themes and promote creative thinking. They investigated many interesting factors and presented various steps in combining PBL with language learning. The following studies are reviewed.

Project-Based Learning can be related to reading ability. The study conducted by Chu, Tse a, Loh and Chow (2011) was on Collaborative inquiry Project-Based Learning: Effects on reading ability and interests. The participants were primary school students, teachers, a school librarian and parents in Hong Kong. The study was in form of case study with an inquiry PBL approach through group projects to enhance the students' reading abilities and interests. The following research tools were used to collect both quantitative and qualitative data: Progress in International Reading Literacy Study (PIRLS) tests to assess the students' reading abilities; survey questionnaire and interviews to examine the participants' perceptions of the inquiry PBL; and the PIRLS survey to measure the students' attitudes and self-perceptions. The findings showed positive effects on the development of students' reading abilities and attitudes and self-perceived abilities. Moreover, reading speed, and vocabulary were also experienced.

Van Lam (2011) studied on PBL in teaching English as a foreign language. The researcher stated that PBL played a vital role in both education in general and specific English teaching and also pointed out that projects were assigned as authentic tasks that made students motivated to participate and engage in the tasks, attract their interest and promote their learning. It can be said that PBL was more meaningful to students in that it could lead to enjoyment and motivation in language class. The researcher of this article presented the steps for implementing a PBL which were Step 1: Students and teacher agree on a theme for the project, Step 2: Students and teacher determine the final outcome of the project, Step 3: Students and teacher structure the project, Step 4: Teacher prepares students for the demands of information gathering, Step 5: Students gather information, Step 6: Teacher prepares students to compile and analyze data, Step 7: Students compile and analyze information, Step 8: Teacher prepares students for the language demands of the final activity, Step 9: Students present the final product, and Step 10: Students evaluate the project. The researcher developed these steps with PBL implementation to motivate the students not only inside class but also in the real world outside. Project-Based Learning (PBL) was beneficial to help the students well gain authentic knowledge, cooperation, and prepare for their future career and life in terms of both English communication and social skills.

Project-Based Learning becomes popular among researchers in the 21st century. Ch. Zafirov (2013) studied new challenges for PBL in the digital age. The article was designed to present the benefits of using the methodology and tools of PBL together with the main characteristics in which the evolution of teaching strategy was differently shown. As the evidence gained and shown in classroom, students' engagement in learning was increased when they worked together on challenging tasks or projects found in their real life.

According to these researchers, PBL was included in language teaching since it was regarded as the students' assignment that could motivate and attract their attention. Task engagement in PBL was useful and enjoyable in that the students get more knowledge and cooperation. They were encouraged to engage in the challenging tasks or activities and try to work or find the solution together. It can be concluded that PBL is an important approach that enhances the students' 21st century skills which are collaboration, communication and creative thinking. Also, PBL can prepare the students for their future careers and life.

3.2.4 Creative Thinking Abilities

Creative thinking is one of 21st century skills that many researchers have taken into account in their study. Doppelt (2004) investigated a methodology for infusing creative thinking into a Project-Based Learning (PBL) and its assessment process which was targeted at enhancing the students' creative thinking. In the process, different teaching method, learning environment and selection of assessment methods such as portfolio are all required to be used. The samples of the study were 128 high school pupils at the age between 16 and 18 who are in grade 10-12 and have studied Mechatronics. Before they finished grade 12, the pupils were assigned to create 57 projects with the use of a creative design process (CDP) for recording the design process and a Creative Thinking Scale (CTS) for being used by teachers and pupils as a guideline while doing a project. This study was conducted by using PBL and assessment tools so as to investigate the pupils' performance while doing the assigned project. Additionally, a diary, interview, observation in class activities and portfolio assessment were all the researcher's equipment for data collection. Barak and Doppelt (2000) suggested that portfolios were used to assess both students' thinking and learning processes and their creative thinking. Besides thinking and learning processes, teamwork and cooperation in class were also focused. When constructing portfolios, the students' process was reexamined. In terms of creative thinking, portfolios were used to develop process of the product and express higher order thinking levels. The portfolio might be in the forms of written materials, computer files, video items, drawings, pictures, models and so on. The teacher could trace what the students learned, how they interacted and mutually created new things and also how they questioned, critically analyzed, synthesized, solved the problems together, helped design, created new ideas and launched useful products (Doppelt, 2004). In portfolio assessment, the Creative Thinking Scale (CTS) was employed both as a tool to assess the students' portfolios and the students' guideline during doing their project. The application of CTS was considered in two components which were 1) system or product design, construction and evaluation and 2) processes of learning, thinking, problem solving and teamwork. According to Doppelt (2004), CTS was created to assess four thinking layers which were 1) awareness 2) observation 3) strategy or tools and 4) reflection. Besides, the Creative Thinking Scale (CTS) was created and applied in two aspects of portfolios which were 1) system or product design, construction and evaluation which both lateral and vertical thinking was used and 2) processes of learning, thinking, problem-solving and teamwork (Barak & Doppelt, 2000). The results gained from the study showed that the pupils' design process was highly documented in CDP and their creative thinking found in the project was reflected and shown by using CTS. However, the researcher pointed out that documentation on teamwork and pupils' reflection needed to be studied.

Creative thinking can be combined with Project-Based Learning. Hsieh, Lou and Shih (2013) conducted the study on applying blended learning with creative PBL: a case study of wrapping design course for Vocational High School students. The objective of the study was to examine learning effects and satisfaction on the wrapping design course in which blended learning and creative PBL were integrated. The participants were totally 44 students from the Advertising and Design Course and then divided into 11 teams with a group of 4 people to do a gift wrapping design activity with the blended learning combining between the traditional instruction and online learning as a platform for the students' self-design, discussion and idea including other related information sharing together. In this study, teamwork, PBL, the inquiring-thinking-doing-evaluating, and the 12 creativity tactics were focused during the study. In data collection and analysis, satisfaction survey questionnaire, online learning platform, classroom observation, portfolio, and completed products were used as tools. The findings showed that seven stages were regarded as ideal teaching model for integrating blended learning with creative PBL with the supplement of teacher's guidance, the practice of creativity teaching methods, teamwork, and online resources which affect the students' performance as well as learning effects. Additionally, blended learning could help to promote self-learning skills, problem solving and communication.

4. Method

This study aims at investigating whether the AMARA Model created based on Concept-Oriented Reading Instruction (CORI) and Project-Based Learning (PBL) produces a significant effect on Thai learners' reading abilities and creative thinking abilities. This study also investigates what reading strategies the learners use frequently to improve their reading abilities after the AMARA Model was implemented.

For readers to understand the whole methodology procedure, this section first discusses the participants of this study. It then explains how the research is designed. Finally, the instruments used to gather data from the study and their validity and reliability are presented explicitly.

4.1 Participants

In this study, 35 undergraduate students participated. These participants were enrolled in the course of Business English in the first semester of the academic year 2018. The researcher spent over eight weeks to collect the data. The purpose of this course was to train students to practice reading English in business context so that they could apply such knowledge to working in the future. The students were asked to sign consent forms to ensure that their participation in this investigation was optional.

4.2 Design and Development

In the Thai context, studies oriented toward using a business reading model designed based on CORI and PBL to promote Thai learners' reading and creative thinking abilities remain sparse. Most studies have centered around investigating learners' reading strategies in general. To bridge the gap, this study aims to investigate whether the business reading model produces a positive effect on Thai undergraduates' reading abilities and reading strategies. The study also intends to see whether the instructional model facilitates the participants to demonstrate the ability to think creatively. Therefore, the model development was conducted in Research and Development procedures and designed systematically by using ADDIE Model as the instructional framework. There are four phases involved in developing the model during the research and development process. The first phase deals with *Research 1 (R1: Analysis)*. In this phase, all relevant documents are analyzed as information for the development of the model. Another phase is known as *Phase 2: Develop 1 (D1: Design and Development)*. This phase explains how the model was developed. It involves all steps taken to develop the business reading model. In this study, phase 3 or *Research 2 (R2: Implementation)* describes how the business reading instructional model was implemented in the classroom. Phase 4 or *Develop 2 (D2: Evaluation)* presents effects of the instructional model on the current participants' reading and creative thinking abilities. Also, phase 4 shows what reading strategies the participants correctly used to show the enhancement in their reading abilities. The four phases are explained in great detail as follows.

Phase 1: Research 1 (R1: Analysis)

This phase aimed at gathering relevant information required for developing the instructional model of this study. At this juncture, three major steps were taken. First, related studies were analyzed and synthesized. The goal of this step was to obtain useful information for the development of the model. Second, a semi-structured interview was conducted among English lecturers whose academic expertise centered around business English. The purpose of conducting the interview was to obtain effective business reading instruction for Thai university students. Finally, a needs analysis questionnaire was administered to university students to gain insights into what reading strategies they need to improve. Furthermore, the questionnaire encouraged the respondents to provide the areas of difficulty they would find during reading activities.

Phase 2: Develop 1 (D1: Design and Development)

In this phase, the business instructional model of this study was designed and developed based on the information gained from phase 1. There are four factors: *objective*, *principle*, *procedure*, *outcome* involved in the development of the business model. The first factor is *objective*. The objective of creating the business model was to enhance Thai learners' reading and creative thinking abilities, which is further shown in figure 1. In terms of *principle*, the model was designed to enhance the learners' reading engagement, use of reading strategies, and collaborative learning. Another factor deals with *procedures*, four of which are explained under the factor of *principle* (i.e., under three principles: reading engagement, reading strategies, and collaboration), while the other or *Assessment* (A) is explained as to how the students' ability to read and think creatively is assessed (see Phase 3: Research 2 (R2: Implementation)). Under the factor of *procedure*, the reading strategies used by the students is also explained. In this study, the factor of *outcome* is shown and described in detail in the findings section. It should be noted here that only the objective, principles, and four out of five procedures are explicitly elucidated

under this subheading. In this model, three principles are involved. For further clarification, these three principles are discussed as follows.

1) Reading Engagement

During this principle, there occurred two procedures known as *Activating Students' Background Knowledge* (labeled as A) and *Motivating Students' Reading* (labelled as M). During the former procedure, the teacher asked the students questions designed to motivate their background knowledge. In the latter, they were motivated to read more business texts by searching information for the questions raised during the first procedure.

2) Reading Strategies

Under this principle, the procedure of *Action-Taking* (labelled as A) was introduced. The aim of this procedure was to encourage the students to use reading strategies while reading business texts provided and modeled by the teacher. In this study, the reading strategies include *use context clues*, *find the main idea*, *reread for clarification*, *make inferences*, *take notes*, *identify text structure*, *make predictions*, *make a summary*, and *map the concepts*. According to relevant studies (Kucukoglu, 2013; Soleimani & Hajghani, 2013), these reading strategies are used frequently to foster English learners' reading skills.

3) Collaborative Learning

In this principle, the procedure of *Running a Project* and *Making Presentations* (labelled as R) was targeted. Most specifically, the R procedure allowed the students to use their creativity gained from the procedures of *Activating Students' Background Knowledge*, *Motivating Students' Reading*, *Action-Taking* to run a project and then make a presentation.

As discussed, there are three principles: reading engagement, reading strategies, and collaboration involved in the design and development of the business reading model. In these three principles, there are four procedures included: *Activating Students' Background Knowledge* (A), *Motivating Students' Reading* (M), *Action-Taking* (A), and *Running a Project* and *Making Presentations* (R). Again, the reading model consists of five procedures, four of which are presented under the factor of *principle*, while the other (Assessment) is explained in Phase 3: Research 2 (R2: Implementation).

Phase 3: Research 2 (R2: Implementation)

In this study, Phase 3 focuses on the implementation of the business reading model in an English business reading class. In this study, the instructional model is coined as AMARA Model, an acronym for activating students' background knowledge (A), motivating students' reading (M), action-taking (A), running a project and making presentations (R), and assessments (A). The AMARA Model was implemented with a group of 35 university students over eight weeks. The instruction can be explained in five procedures as follows. It should be noted here that these procedures have been presented in Phase 2: Develop 1 (D1: Design and Development).

1) Activating Students' Background Knowledge (labelled as A)

In this procedure, the teacher activated the students' background knowledge by providing a short text, photos relevant to the theme and asking them questions. For example, the students studying the theme *brand* read a short text about "brands and brand names" and were asked questions from the pictures of brand-name and unbranded bags. The questions that activated the students' background knowledge were various such as *What bag are you using now?*, *What color of this product is very popular?*, or *Why are you using this brand?* The purpose of this procedure was to engage the students in the reading activity.

2) Motivating Students' Reading (labelled as M)

During this procedure, the students were encouraged to search further information about brand-name products from various kinds of texts provided by the teacher or on the Internet. In other words, the students were asked to present how a product was made, who made it, and why the brand is still popular nowadays. This procedure allowed the students to come up with an idea for their final business mini-projects.

3) Action-Taking (labelled as A)

As elucidated in Phase 2: Develop 1 (D1: Design and Development), this procedure encourages the students to demonstrate their abilities to use the target reading strategies, all of which have been presented in Phase 2: Develop 1 (D1: Design and Development) and Figure 1. To further demonstrate, the students were assigned to read a business reading text that was accompanied by questions involving the nine reading strategies. In this procedure, the students were modeled the reading strategies by the teacher and provided with an opportunity to practice using the target reading strategies while reading business passages.

4) Running a Project and Making Presentations (labelled as R)

This procedure allows the students to use the idea that occurred during M (motivating students' reading) to run a mini project and make a presentation. The students were asked to work in a group of five. There are five steps involved in this procedure. First, the current students had a brainstorm about the project. This step was taken to encourage the students to choose the best idea for their project. Second, they planned and designed the project. Finally, the students were provided with an opportunity to make a presentation about the project. During this step, they were asked to share ideas with one another.

5) Assessments (labelled as A)

In this procedure, the students' reading abilities and their creative thinking abilities to run a project were assessed. In this study, a reading comprehension test with 40 items was constructed and administered as a pre-test and a post-test to assess the participants' reading abilities and their use of reading strategies. Furthermore, a five-point Likert scale questionnaire was created to determine the participants' creative thinking abilities through their mini projects. In this study, both reading comprehension tasks and questionnaires were determined for their validity and reliability. In terms of validity, the reading test and questionnaire were sent out to five instructors whose areas of expertise relied heavily on English language education and assessments. The Index of Item Objective Congruence (IOC) was used to determine the content validity of each item targeted in the two tasks. Under investigation, all test items were determined by a minimum IOC value of 0.75, which is considered statistically acceptable (Turner & Carlson, 2003). In terms of reliability, the AMARA Model was evaluated to ensure its efficiency. The efficiency of the AMARA Model was determined before and after the actual experiment. This process is further explained in *Phase 4: Develop 2 (D2: Evaluation)*. Figure 1 presents the findings of the AMARA Model implemented before and after the actual research. In this study, a t-test is used to analyze the data. More importantly, t-test is conducted to see the difference between pre-test and post-test scores.

Phase 4: Develop 2 (D2: Evaluation)

In this phase, the AMARA Model was evaluated to ensure its efficiency. There were two steps taken to ensure the efficiency of the AMARA Model. First, the AMARA Model was sent out to a group of Thai instructors whose areas of expertise centered around English instruction and assessment. Second, the model was evaluated by means of efficiency (E1/E2). In this regard, E1 refers to the efficiency of the process conducting along the AMARA Model as a whole. To put it differently, E1 evaluated all the activities conducted during the classroom experiment. E2 or the efficiency of the product (the AMARA Model) serves as the results in percentage of means gained from all scores the students did as the post-test outcomes. The results of both E1 and E2 are further detailed in *4.3 Efficiency of the AMARA Model*. Figure 1 shows how the AMARA Model is designed and developed.
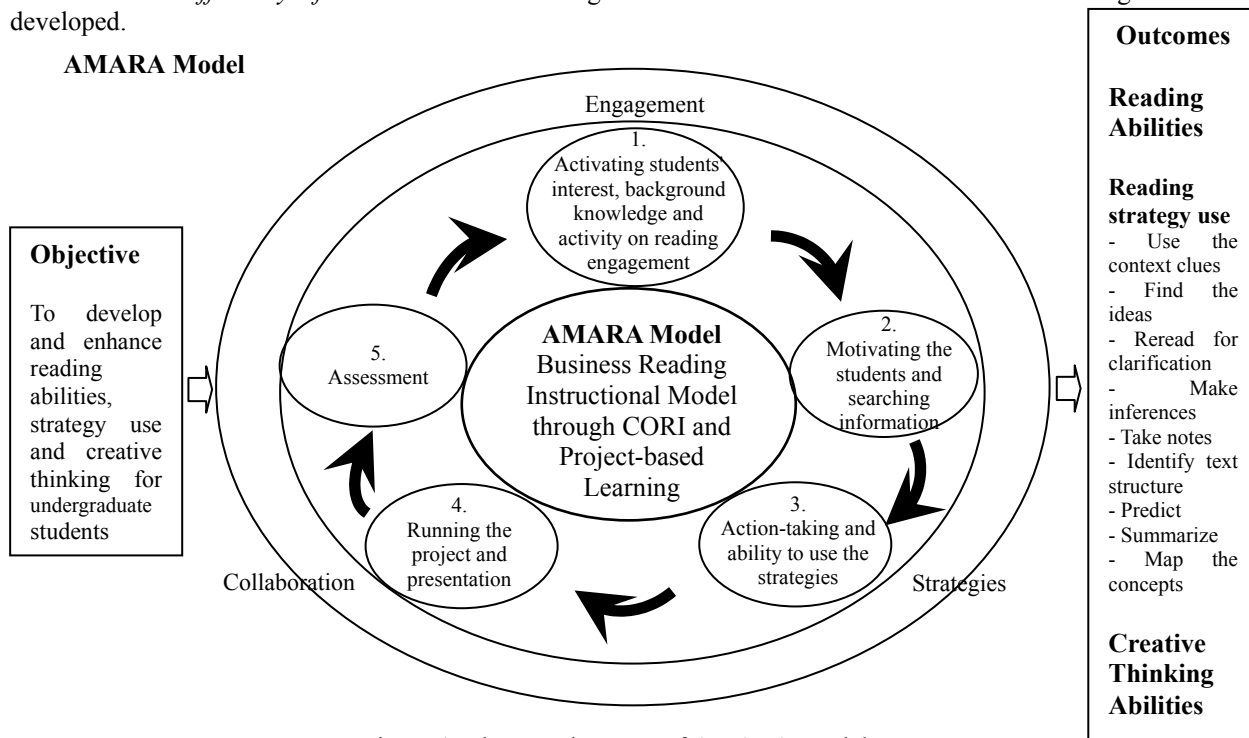

Figure 1. The Development of AMARA Model

4.3 Efficiency of the AMARA Model

The AMARA Model was determined to ensure its efficiency before and after the experiment. In this study, the criterion of efficiency was set based on 75/75 (E1/E2). The former value of 75 refers to how efficient the AMARA Model was implemented during the experiment process, while the latter value means the efficiency of the AMARA Model after the experiment. This study also opts for the value of 72.5% as an acceptable level of efficiency. In Table 1, the process was represented by *E1*, and the product was valued as *E2*. The efficiency is presented as results from both the pilot study and the actual study.

Table 1. Effectiveness of the AMARA Model

Categories	Number of Students	Total scores	Mean	SD	Efficiency
E1: Process (pilot study)	27	120	89.07	3.68	74.23
E2: Product (pilot study)	27	40	30.04	3.07	75.09
E1: Process	35	120	90.11	4.59	75.10
E2: Product	35	40	31.11	2.04	77.79

In Table 1, the efficiency of the AMARA Model before the actual study is 74.23 (E1: process) and 75.09 (E2: product). The table also shows the efficiency of both process (E1) and product (E2) after the implementation which was 75.10 and 77.79. In E1 process, the students were asked to do exercises after units with the total score 15 items in each unit. There were eight exercises after units that the students had to do. This phase investigated the efficiency of students' learning along the process. It focused on the percentage of the average or means of all scores the students earned from their exercises after units. Regarding E2, the efficiency of E2 was derived from the percentage of the average or means of all scores the students earned from their post-test. However, the results of both E1/E2 were 75/78 and met the set criteria (75/75). This meant that the business reading instructional model had the quality appropriate for further dissemination.

5. Results

This section presents the findings regarding effects of the AMARA Model on Thai learners' reading abilities. The section then presents the results of reading strategies correctly used by Thai learners. For convenience, the results are demonstrated and structured as follows.

5.1 Effects of the AMARA Model on Thai Learners' Reading Abilities

Table 2. Effects of the AMARA Model on Thai learners' business reading abilities

Tested factor	Pre-test		Post-test		t	p
	Mean	SD	Mean	SD		
Students' reading abilities	22.17	3.33	31.11	2.04	20.62	0.00

As shown in Table 2, there is statistically significant difference between the pre-test and post-test scores. Simply put, the post-test score (31.11) is higher than the pre-test score (22.17) at the level of significance (p 0.00 < α 0.05; H1 is statistically accepted). Accordingly, it can be concluded that the AMARA Model helps enhance the current participants' reading abilities.

5.2 Use of Reading Strategies among Business Reading Thai Students

As presented in the methodology, nine types of reading strategies were targeted in this study. Again, the reading strategies under investigation include predicting the content, using the context clues, finding the main ideas, rereading to clarify possible misunderstanding, making inferences, taking notes, summarizing the text, identifying text structure, and mapping the concepts and integrating information. In response to Research Question 2, the findings regarding the Thai learners' reading strategies are revealed as follows.

Table 3. Thai learners' reading strategies after the implementation of the model

Reading Abilities	Pre-test		Post-test	
	Percentage	Ranks	Percentage	Ranks
1. Predict the content (Relating to the background knowledge)	46.43	7	72.86	6
2. Use the context clues	30.95	8	68.57	8
3. Find the main ideas	82.29	1	94.29	1
4. Reread to clarify a possible misunderstanding	53.57	6	76.43	5
5. Make inferences	62.14	4	71.43	7
6. Take notes	67.43	3	89.14	2
7. Summarize the text	69.29	2	79.29	4
8. Identify text structure	23.81	9	60.00	9
9. Map the concepts and integrate information.	57.14	5	80.57	3

Table 3 shows the percentage of top five reading sub-skills that the respondents gave correctly in both pre-test and post-test. In the pre-test, the most accurate responses were find the main ideas (82.29%), summarize the text (69.29%), take notes (67.43%), make inferences (62.14%), and map the concepts and integrate information (57.14%), respectively. After the treatment was given to the students, they were asked to do the post-test. When compared with the pre-test, it was found that the students could improve every reading sub-skill in the post-test and do more strategies correctly. More students were able to get more scores and use strategies correctly. The reading strategies were also ranked in top five orders which were find the main ideas (94.29%), take notes (89.14%), map the concepts and integrate information (80.57%), summarize the text (79.29), and reread to clarify a possible misunderstanding (76.43%). To sum up and make the picture clearer, the bar chart was made and presented as follows:
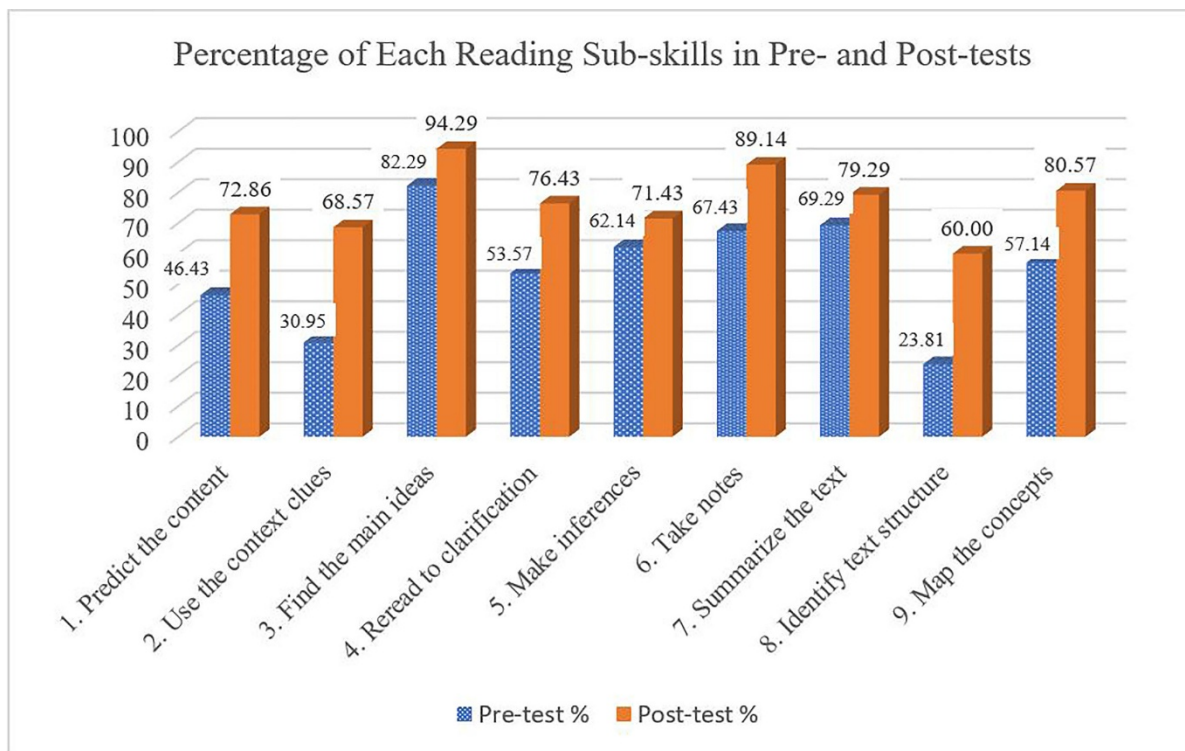

Figure 2. Percentage of Each Reading Sub-skill in Pre- and Post-tests

In conclusion, the students gave more correct answers for the post-test. It can be seen that find the main ideas was ranked as number 1 as the sub-skill that the most students could do correctly in both pre- and post-test. Moreover, every sub-skill in the post-test was higher and more students could do more correct answers.

Therefore, it can be interpreted that more students' reading abilities were more developed in every sub-skill instructed and drilled in class.

5.3 Development of Students' Creative Thinking Abilities

Regarding creative thinking abilities, the students were asked to evaluate their creative thinking in the group through creative thinking questionnaire. The criteria used in assessing the students' creative thinking were based on two domains which were 1) four thinking layers in creating the projects based on Creative Thinking Scale, and 2) product construction. Regarding four thinking layers, awareness on thinking, observation, thinking strategy and reflection were focused; however, design and evaluation were assessed with regard to product construction. In terms of four thinking layers, students were asked to assess their teammates and the following are findings of four thinking layers with criteria shown in the table below.

Table 4. Mean scores of peer-assessment on thinking layers in each criteria

Peer Assessment on Thinking Layers	Mean
Awareness on Thinking	4.73
Thinking Strategy	4.59
Observation	4.54
Reflection	4.64
Result	4.63 = Very High

Table 4 shows mean scores on students' assessment in their own group on thinking layers in creating the project. As can be seen that the results of each criteria are given. In four thinking layers of creative thinking, the students' awareness on thinking was mostly considered while processing the project with the mean score at 4.73, followed by reflective thinking at 4.64, thinking strategy at 4.59 and observation at 4.54, respectively. It can be concluded that the teammates in every group rated their peers as "Very High" level of thinking layers with the mean score at 4.63.

Besides, the students in each group were asked to create their own product so they had to think and plan together to creatively construct it. Therefore, after creating their product, they were asked to evaluate their planning processes in designing and constructing the product. The items on product construction were also inquired by using two criteria which were design and evaluation assessed by both peers and teachers. The following table shows the details of mean scores on teachers' assessment on students' product construction in each item. To picture both peer- and teacher-assessment in the domain of product construction, the following table presents the mean scores gained in terms of design and evaluation.

Table 5. Mean scores of peer- and teacher-assessment on product construction

Product Construction	Peers N = 35	Teachers N = 2
Design		
- Well-planned product's features and specifications	4.60	4.86
- Well-designed and detailed drawing of the model	4.57	4.86
- Systematically constructed product	4.63	5.00
Mean	4.60	4.91
Evaluation		
- Best consideration, comparison and selection of various models	4.63	5.00
- Creative development on product and interesting presentation	4.74	4.50
Mean	4.69	4.75
Overall Mean	4.65	4.83
SD	0.06	0.11
Result	Very High	Very High

As can be seen from both teachers and group members' assessment on product construction, the mean scores gained from students' assessment were at 4.60 and teachers' assessment at 4.91 in terms of design. Regarding evaluation, the students rated their peers with average scores at 4.69 and the teachers' mean scores were at 4.75. However, in the domain of product construction, the students' mean scores were at 4.65 and the teachers at 4.83 which were interpreted as "Very High" level of abilities in constructing creative product.

In conclusion, both teachers and the students had the same opinions on creative thinking layers and product construction. In mini-project development, the students could well cooperate with their peers and their creative thinking performance after employing the business reading instructional model was rated in "Very High" level because the students could think step by step and plan their product construction creatively.

6. Discussion and Conclusion

This study has developed the AMARA Model to see its effects of Thai learners' reading abilities and reading strategies. It also determined whether the AMARA Model helped promote the learners' creative thinking abilities. The findings show that the students' reading abilities significantly improved according to the business reading instructional model. It was also found that the students used various types of reading strategies to improve their reading abilities. The top three reading strategies used by these students include finding the main idea, taking notes, and mapping the concept and integrating information. In terms of creative thinking abilities, the AMARA Model was considered very effective. Simply put, the model helped promote the students' creative thinking abilities when they did a reading project with their peers.

As can be seen that the research conceptual framework of the business reading instructional model was systematically and logically designed and ready for implementation. However, the processes of the model design were all discussed in detail as follows:

The study was conducted in the Research and Development procedures which played the vital role in creating the new knowledge and innovation to develop the students' ability. Innovation here might be creating the new body of knowledge on an existing or totally new product or process. In the study, the main objective was to design an effective business reading model to enhance the students' proficiency and the processes mattered. Therefore, the processes to create the business reading model were to review the instruction theories, principles, teaching procedures, assessment including interview with business English lecturers and needs analysis, then analyze and synthesize the existing data to formulate and create the new one which was differentiated and developed. This idea corresponded to Luenendonk (2014) who gave a Research and Development overview in his article. Besides R&D procedures, "ADDIE" Instructional Design was used to create the research conceptual framework, methodology and data collection. ADDIE design was distinguished with its clear instruction and implementation in each step (Forest, 2014). The components of ADDIE design are Analysis, Design, Development, Implementation and Evaluation which help the model well and systematically organize. The design of the business reading instructional model was based on the analysis of theories, instruction procedures and students' requirements consistent to what Forest (2014) and Kurt (2015) suggested that the analysis stage should focus on the target audience, their achieved performance and the documents relevant to them such as university curriculum and course syllabus. Then the researcher could use the data gained from analysis stage to design the model and other research instruments such as lesson plan, instructional materials, exercises and assessment form. The implementation stage was the reflection on efficiency of the model which would be developed to the maximum results according to the expert's evaluation.

In the design of the study, the components of the business reading model comprised 1) Principles; 2) Objective; 3) Instruction Procedure; and 4) Assessment. The principles of the model were created from the main instruction theories of this study which were CORI and PBL. The principles synthesized from both CORI and Project-Based Learning were 1) strategies, 2) collaboration and 3) engagement. The reasons why CORI and PBL were chosen in process design were to enhance the students' engagement or motivation and reading strategy instruction corresponding to the business English lecturers' opinions and students' needs analysis. One of them thought that Concept-Oriented Reading Instruction (CORI) could enhance the students' reading engagement, reading strategies and teacher's support for enhancing students' reading comprehension. Additionally supported by the students' needs, they said that they need a technique to get main ideas in order not to waste time to interpret all the content in a reading text so they thought reading strategy instruction was crucial. This corresponds to the findings that Vongkrachang and Chinwonno (2015), and Kalsum, Bambang, and Wayan (2017) presented in their articles. They said that CORI could enhance the students' engagement or motivate them and effectively increase their reading comprehension.

When the mean score of post-test was compared to pre-test, the study showed the development of students' reading abilities. The mean score of pre-test was 22.171 ($\bar{x}$), 3.329 (SD) whereas the result of post-test after the instruction showed that the mean score was 31.114 ($\bar{x}$), 2.040 (SD), higher than the pre-test and significantly different ($p<0.05$). The study revealed that in the pre-test, the higher number of students could do more correct answers on the following sub-skills: find the main ideas, summarize the text, take notes, make inferences, and map the concepts and integrate information. Then the students were tested again after instruction, they took the post-test. It was found that they could give the correct answers on these five reading sub-skills such as find the main ideas, take notes, map the concepts and integrate information, summarize the text, and reread to clarify a possible misunderstanding. The reasons why the business reading instructional model could help to promote these students' reading abilities were explained as follows:

It was found that the students' reading abilities were developed due to the fact that CORI assisted the students with the strategies they needed for enhancing their comprehension. This was consistent with what Komiyama (2005) reviewed in her work. She also pointed out that Concept-Oriented Reading Instruction was expected to be used by readers who had enough linguistic abilities and were able to convey the ideas to others in terms of the conceptual themes. However, Stoller (2004) cited in Komiyama (2005) indicated that Concept-Oriented Reading Instruction promoted the success in learning with the integration between content-based instruction and reading in second language affirmed by Fannin (2011) and Kalsum, SUWARNO, Dharmayana (2017) who conducted the studies on Concept-Oriented Reading Instruction and found out that the strategy could enhance the students' reading comprehension effectively. They stated in their research that the students' improvement on reading comprehension and their scores on the post-test resulted from the use of Concept-Oriented Reading Instruction. The students became active readers, motivated and focused more on reading texts they were interested in, felt comfortable in their fascinating reading texts and promote their long-term memory in reading comprehension. All concepts corresponded to the philosophy to achieve ESL students' reading comprehension developed by Anderson (1999). However, most elements found in his theory correlated to the researcher's strategies which were: activate prior knowledge; cultivate vocabulary; teach for comprehension; increase reading rate; verify reading strategies; evaluate progress; build motivation and planning; and select appropriate reading materials. All of these features were considered the instruction strategies used in the study and could help enhance the students' achievement on their reading comprehension.

In terms of the reading strategies found the most correct in the study, many reasons were considered and discussed. The following sub-skills: find the main ideas; take notes; and map the concepts and integrate information were the correct answers given by the students in both pre- and post-test whereas identify text structure was the least found. The reason why most students gave the correct answers on this sub-skill might be because they were drilled in class. Additionally, the reading strategies were all the necessary sub-skills used in reading comprehension, especially find the main ideas which was correctly chosen in both tests whereas most students gave wrong answer on identify text structure. The students were English major and minor students so they had knowledge on some reading strategies. Moreover, the teacher asked the students to find the main ideas very often in class activities so they could use this strategy correctly and autonomously. Regarding identify text structure, least students could give the correct answer on this sub-skill. This may be because of the number of test item of this sub-skill. In the test specification, the number of the test was considered from needs analysis and identify text structure was needed the least so the researcher created only 7% of the test items for this sub-skill which was the least sub-skill to be assessed.

To enhance the students' creative thinking, the assessment was done by using the creative thinking questionnaire developed for using in the study. As can be seen from the results of each criteria gained from four thinking layers, the students' awareness on thinking was mostly considered, followed by reflection, thinking strategy and observation, respectively. Most students were aware that thinking was a skill that could be developed and listened to others' opinions and prepared to give reasons when being inquired. With regard to product construction, mean score on evaluation was higher than design according to the students. This showed that the students emphasized on best consideration, comparison, selection of various models, creative development on product and interesting presentation. In contrast, the teachers rated the highest mean score on design which showed that the students' product construction was excellent because of their well-planned product's features and specifications, well-designed and detailed drawing of the model and systematically constructed product. The reasons why both mean scores on four thinking layers and product construction were rated highest by the students might be because they were aware of the importance on creative thinking process together with cooperation in team to successfully construct the products and share their ideas and knowledge to peers. This study was also aligned with the benefits of cooperation in PBL which supported the students' learning and

creation process. According to Doppelt (2004), learning environment with PBL and creative thinking could promote the students' group projects. They helped to plan the project, build activities, and develop creativity. Moreover, it could be implied that cooperation to develop the students' mini-projects and enhance their creative thinking could also promote their motivation in reading with the sharing knowledge and ideas with peers.

All in all, the model can produce the positive effects on the students' development in terms of reading abilities with the higher mean scores, more correct strategy use of reading sub-skills after the post-test and very high level in creative thinking abilities assessed by both teachers and teammates with regard to four thinking layers and product construction.

7. Pedagogical Implications and Recommendations

This study has pedagogical implications and recommendations for further studies as follows.

In this study, the AMARA Model was designed based on CORI and PBL, which took several steps. For this reason, some teachers may find it difficult to implement the model in their classrooms. To benefit greatly from the model, it is suggested that teachers receive training in how to conduct reading classes and design effective teaching materials.

This study provides recommendations for further studies as follows.

The Business reading model through CORI and PBL to enhance reading abilities for undergraduate students is very striking in terms of reading for concepts, personalizing, and searching for interesting information which are all found in Concept-Oriented Reading Instruction (CORI); additionally, cooperative activities, idea sharing and motivation development are features found in Project-Based Learning (PBL). However, all these features led to reading engagement can be integrated with other disciplines such as engineering, mass communication, and medication which need motivation and cooperation to create innovative ideas in their activities. Besides, a comparative study between the students given the treatment and the ones with no treatment should be done and the group can be enlarged with greater amount of students in the treatment.

Acknowledgement

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Appendix 1

Samples of test items

Paragraph A

The holiday shopping season usually begins on the day after Thanksgiving which mostly is a Thursday. _____. Since 2005, Friday or well-known day, Black Friday, has been known as the busiest shopping day of the year.

1. Which sentence should be put in the blank to make a meaningful paragraph A?

a. Therefore, the day after Thanksgiving must be a Friday.

b. Then most people prefer going on the next day, Friday.

c. So people still celebrate on their Thanksgiving which is Friday.

d. Consequently, shoppers look forward to going to the stores on Friday.

Paragraph B

On Black Friday, great deals with big discounts such as TVs, computers and so on are offered to the shoppers and most stores open their doors in the wee hours of the morning. The prices of many items are much lower than usual. Stores hope that shoppers spend money on those discounted items as gifts for their family, friends or other people they know even though they may lose money on those items.

2. Which situation most closely matches the meaning of the words "wee hours" in Paragraph B?

a. People have waited in front of the stores since 6 o'clock in the morning.

b. Most stores will be closed during the day but open again in the early morning.

c. After midnight, people spend time on shopping in the stores in the early hours of the morning.

d. Most enthusiastic shoppers make a deal with most stores to open for many hours in the early morning.

Paragraph C

Regarding shoppers, Black Friday is considered as a great time to get good deals. However, the big issue is that each store does not have enough low-priced items for many shoppers to go around. It may only have a few. For this reason, these items become in high demand. People must wait in long lines to come in the store and get such great deals. Before a door opens, the people may line up hours outside the stores hoping to get a low-priced item like a laptop. But not everyone who wants one will get one. Some disappointed shoppers leave the stores.

3. What is the main idea of Paragraph C?

a. People who wait in long lines on Black Friday.

b. Black Friday is a great time for most shoppers to get good deals.

c. Black Friday deals are the most wanted ones which not everyone will get even one.

d. Black Friday offers low-priced electronic devices and people feel disappointed to leave the stores.

Paragraph E

Why do people call "Black Friday"? It was firstly named in Philadelphia in the 1950s. It came from the police who called this day "Black Friday" due to the fact that it led to the congested traffic. Later in the 1960s, stores tried to change the name of the day into "Big Friday." but it did not **stick**. The name "Black Friday" continued to be called and spread across the country. It seems that it is here to stay.

7. What is the synonym of the word "stick" in Paragraph E?

a. regain   b. reuse   **c. recall**   d. rehearse

11. Which of the followings best describes the organizational pattern of Paragraph E?

a. Description   **b. Chronological order**

c. Compare and contrast   d. Cause and effect

Appendix 2

Creative Thinking Assessment Rubric

Please evaluate the creative thinking found in the group of mini-projects and complete this assessment form by filling in and selecting your most accurate response to each item.

Name-Surname _____

The group being assessed is _____.

Directions: Put ✓ in the box to assess the creative thinking in the group.

Thinking Layers in Creating the Project	*Poor*	*Fair*	*satisfactory*	*Good*	*Excellent*
1. Everyone in the group is aware that thinking is a skill that can be developed.					
2. Everyone in the group listens to other people's opinions and prepares to give reasons when being inquired.					
3. Everyone in the group helps design goals connecting to prior knowledge, generate and analyze the ideas, record concepts and choose the best one.					
4. Everyone in the group helps modify thinking pattern, build prototypes and make changes as needed.					
5. Everyone in the group observes and considers the consequences of choices having been made.					
6. Everyone in the group is aware of reflective thinking of the friends within and between group(s).					
7. Everyone in the group considers methods to implement these designed thinking tasks.					

Product Construction	*Poor*	*Fair*	*satisfactory*	*Good*	*Excellent*
1. The product's features and specifications are considered and well planned.					
2. The product is well designed, constructed step by step and achieved the set goals.					
3. The detailed drawing of the model is planned and made.					
4. The different models have been considered, compared and chose the best one.					
5. The product is creatively developed and presented interestingly.					

Problems found in planning and construction
_____
Other comments
_____

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