A STUDY OF THE EFFECTIVENESS OF THE OUTLINING TECHNIQUE ON READING COMPREHENSION OF THE FIRST YEAR NURSING STUDENTS AT MAHIDOL UNIVERSITY

SUCHADA RERKAROONTHONG

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In view of the importance of reading for ESL readers, programmes in university have paid a great deal of attention to help students acquire reading comprehension skills.

This study attempted to examine the use of the outlining technique in non-native student reading classes. The main purpose of the study was to determine if the outlining technique had an effect on reading comprehension of Mahidol first year nursing students.

Two groups (n = 60) were randomly assigned to experimental and control groups. The experimental group received the outlining technique whereas the control group followed the product-oriented approach. The data of this study were obtained through an English reading comprehension test and a questionnaire.

Results of the study showed that the mean scores obtained from the post-test, in both the control and the experimental groups, were higher than those from the pre-test with a statistical difference ($p < .001$.). The post-test mean scores of the experimental group were higher than those of the control group with a statistical difference ($p < .001$.). Comparing the two levels of reading ability, low-reading ability students in both groups showed reading development while the high-reading ability students in both groups did not show any reading improvement. In addition, the students in the experimental group showed positive attitudes towards the outlining technique.

The higher reading achievement in the experimental group indicates that reading activities, classroom discussion, and teaching aids facilitate comprehension. Teachers need to be concerned about improving students' comprehension ability rather than just their comprehension Students share their own experiences and effective reading strategies with other students. This can lead to improved reading and reading comprehension.

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3936775 SCAL/M สาขาวิชา ภาษาศาสตร์ประยุกต์, ศศ ม (ภาษาประยุกต์)

สุชาดา ฤกษ์อรุณทอง การศึกษาประสิทธิภาพของ Outlining Technique ที่มีผลสัมฤทธิ์ในการอ่านของนักศึกษาพยาบาลชั้นปีที่ 1 มหาวิทยาลัยมหิดล (A STUDY OF THE EFFECTIVENESS OF THE OUTLING TECHNIQUE ON READING COMPREHENSION OF THE FIRST YEAR NURSING STUDENTS AT MAHIDOL UNIVERSITY) คณะกรรมการควบคุมวิทยานิพนธ์ อัญชลี พงศ์พันธุ์ M A., GRAHAM K ROGERS M A, MICHAEL TREPIAK M A 126 หน้า ISBN 974-664-777-6

เนื่องจากการอ่านมีความสำคัญต่อผู้อ่านที่ใช้ภาษาอังกฤษเป็นภาษาที่สอง โปรแกรมในมหาวิทยาลัยจึงมุ่งที่จะช่วยนักศึกษาพัฒนาทักษะการอ่าน

การศึกษาครั้งนี้มีจุดมุ่งหมายที่จะศึกษาประสิทธิภาพของ Outlining Technique ในกลุ่มของนักศึกษาที่ใช้ภาษาอังกฤษเป็นภาษาที่สอง จุดประสงค์ก็เพื่อศึกษาว่า การสอนการอ่านด้วย Outlining Technique มีผลต่อการอ่านเพื่อความเข้าใจของนักศึกษาพยาบาลชั้นปีที่ 1 คณะ วิทยาศาสตร์ มหาวิทยาลัยมหิดล

กลุ่มประชากรที่ใช้ในการวิจัยครั้งนี้มี 2 กลุ่ม (60 คน) คือ กลุ่มทดลองและกลุ่มควบคุม กลุ่มทดลองสอนโดยใช้ Outlining Technique กลุ่มควบคุมสอนโดยใช้ Product-oriented approach ข้อมูลของการวิจัยนี้เก็บรวบรวมจาก ข้อสอบวัดผลสัมฤทธิ์ทางการอ่าน และ แบบสอบถามเพื่อวัดทัศนคติของนักศึกษา

ผลการวิจัยพบว่า ทั้งกลุ่มควบคุมและกลุ่มทดลองมีค่าคะแนนเฉลี่ยของ post-test สูงกว่าค่าคะแนนเฉลี่ยของ pre-test อย่างมีนัยสำคัญทางสถิติที่ระดับ 001 ค่าคะแนนเฉลี่ย post-test ของกลุ่มทดลองสูงกว่าค่าคะแนนเฉลี่ยของกลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ระดับ 001. จากผลการเปรียบเทียบความสามารถทางการอ่านของนักศึกษาที่มีความสามารถในการอ่านระดับสูงและต่ำพบว่า นักศึกษาที่มีความสามารถการอ่านในระดับต่ำทั้งในกลุ่มทดลองและกลุ่มควบคุมพัฒนาการอ่านดีขึ้น นักศึกษาที่มีความสามารถการอ่านในระดับสูงทั้งในกลุ่มทดลองและควบคุมไม่ได้พัฒนาการอ่าน นอกจากนี้ นักศึกษาในกลุ่มทดลองได้แสดงทัศนคติในทางบวกต่อ Outlining Technique

ผลการวิจัยเสนอแนะว่า การอ่านที่มีผลสัมฤทธิ์สูงของกลุ่มทดลอง แสดงให้เห็นว่ากิจกรรมการอ่าน การโต้ตอบในชั้นเรียน และสื่อการสอนมีผลต่อความเข้าใจการอ่าน ครูควรคำนึงวิธีที่จะพัฒนาเทคนิคการอ่าน นักศึกษาควรแลกเปลี่ยนประสบการณ์และเทคนิคการอ่าน เพื่อนำไปสู่การพัฒนาการอ่านและการอ่านเพื่อความเข้าใจ

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CHAPTER I

INTRODUCTION

The use of English throughout the world is increasing. It is accepted as the global language not only for communication in many parts of the world, but also for all areas of mass media: scientific research, education, technology, international development and politics. McCrum et al (1992: 19) states that "English at the end of the twentieth century is more widely spoken and written than other languages have ever been. It has become the language of the planet and the first global language". People who operate in the international forum find that their understanding, and use of English effectively will not only be necessary but it will also enhance the success of their activities

Thailand is a developing country. Thais need to excel in the world of business, education, politics and economics Thais also need the English language to express themselves in the world and to access knowledge from other countries in order to develop their daily life and their nation. Much innovative knowledge can be gained from books, articles, journals and magazines. Computers and the Internet too use mainly English.

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With the realization of the importance of English, of the four language modes (listening, speaking, reading and writing), reading is considered as one of the

important sources for language learning in the EFL setting (Alderson 1984, Dubin & Bycina 1991). Pett (1982: 17) states that reading is an important medium in which students gain access to English language. Moran and Williams (1993: 65) confirm that reading seems to be the most attainable skill for students in many non-English speaking countries. Srisa-an (1998: 2) affirms reading is the most essential skill. If the readers lack the ability of understanding what they read, the information is of no value. Dubin and Eskey (1986. 37) stress the importance of reading by saying that "Undergraduates at almost all universities require reading skills as an essential skill. Graduate students have a much greater need for reading since research work of an accepted standard require much reading". The students, therefore, must develop their reading of English in order to cope with the large mass of reading materials.

As the importance of reading has been recognized, Thai students require English reading skills. Most students generally believe that if they read English well, they can gain a lot of knowledge from any field of studies and find a better job with a well-paid salary after their graduation.

Like other students, first year nursing students at Mahidol University require reading skills. Thus, reading courses are provided for first year nursing students as a compulsory subject. The objectives of the syllabus are "to enable the students to read and understand a variety of texts as well as transfer and apply the information contained therein" (Strategies for Success: 1994: 1).

Outlining is used as a reading technique to help students develop reading performance. Outlining is an activity that helps students review the text in a structural way, paying attention to the different importance of the information and the relationships among the information. It also requires students to address their

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comprehension of the whole text and the information in hierarchical position (Richards and Lockhart 1998: 129).

Sola (1996: 50) recommends that the outlining technique can help to alleviate the problems of inexperienced students who lack confidence when reading. It also aids the students to feel confident in ignoring irrelevant information, and visualizing organizational pattern and relationship between ideas.

Langan (1988) asserts that the outlining technique is an organizational pattern that would help the students to think more clearly and logically as they have to organize their ideas and understand the information they read.

Carell (1981) points out that the outlining technique is a reading process which promotes the relationships between the text and the readers. The readers negotiate the meanings of the passages through their knowledge of the language and the knowledge of the information in order to understand the text more thoroughly.

Sonka (1979: 5) also adds that an outline is a functional tool that serves to capture the overall organization and content of an article. Students can make a summary from the outline, use the information from the outline to present orally to the class and use the outline during a comprehension check.

This study was conducted to investigate the effectiveness of the outlining technique on reading comprehension of first year nursing students at Mahidol University in the first semester of academic year 1998 The subjects were 60 first year nursing students. The 60 students were divided into two groups of 30 students: a control group and an experimental group. These two groups were instructed using two different teaching techniques for one semester. One group was taught using the outlining technique whereas the other was taught using the product-oriented approach.

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At the end of the course, the data collected from these two groups were tabulated, categorized and analyzed in order to measure their reading development.

The presentation of this research is divided into six chapters. Chapter 1 consists of the rationale and background of the study, the significance of the study, the scope and limitations of the study, basic assumptions, purpose of the study, research questions and the definitions of terms used in this study. Chapter 2 reviews three models of second language reading comprehension, the use of classroom instruction in second language teaching and learning, the material aids in second language teaching and learning, and the reading activities in the outlining technique. Chapter 3 explains the procedure, sample characteristics and sample size, methods and instruments of the study, and statistical devices. Chapter 4 presents the findings of the study. Chapter 5 contains the discussion of the outcomes and implications for classroom teaching and learning. Chapter 6 provides the conclusions and recommendations for further studies.

Rationale and Background of the Study

Generally, nursing professionals, like any other occupations, need the English language to function in their workplace. English is an important tool that can help them keep pace with the advancements of new technology and progress in their career. This is supported by Suwaraporn (1998) who conducted A Survey of a Job Analysis as a Basis for Determining Needs and Problems in the Use of English Language for Nurses. The findings revealed that nursing professionals need English in four skills, but they strongly preferred reading skills. They must read and understand the investigations of patients' medication, drug instructions, doctors' orders and journals which are written in English.

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Not only are reading skills required by nursing professionals, but they are also required by the English teachers and nursing students at Mahidol University. In accordance with the information received from an informal interview, Dr. Supanee Senadisai, Dean of the Faculty of Nursing at Ramathibodi Hospital, expressed the view that for nursing students, reading should be the primary skill to develop in order to read textbooks, articles and journals written in English. Few textbooks, articles and journals in science and technology are in Thai. The translation of these sources are also not up-to-date. The students were consequently obliged to read English textbooks. Moreover, with reference to a research project by Siriwong (1984), the results showed that the nursing students need English language. However, their greatest need was reading skills to understand the information from English journals and textbooks assigned by the teachers so that they can pass the examination and use it in their future work and higher education.

Although the reading comprehension is an important skill for nursing students, not many first year nursing students at Mahidol University succeed in their reading comprehension ability. According to their entrance examination scores, most students received marks lower than 50%. Therefore, the researcher informally interviewed first year nursing students so as to find out their reading problems. Most of the students reported that there were various causes that blocked their reading comprehension. They stated that teachers provided insufficient time for reading in a lesson. They spent amounts of time reading word by word, or sentence by sentence, in order to understand as much of the passage as they could. They had inadequate knowledge of vocabulary meaning and structure to influence their reading comprehension. They did not understand the passages because they did not have enough vocabulary and

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structure knowledge. They also expressed the view that before reading, their background knowledge was not activated in relation to the title they were reading. As a result, they had trouble in learning and remembering the information found in the passage. They were not always taught how to read since the teachers generally concentrated on the answer to the exercises at the end of the passages. Reading in the classroom was to test the students' ability to come up with the product, but not to give any useful reading strategies (Konare 1994: 6). Silberstein (1987) adds that in the ESL reading classroom, most teachers look at a classroom procedure that pays some attention to the product of the reading than the process of reading. Reading process in the product-oriented approach was controlled by the teacher. The teachers told their students to read a text, after which the students were told to do the exercises. There was little attention paid to pre-reading activities, during-reading activities and post-reading activities. The students focused their attention on how to find the right answer from the passage since the main ideas were often located in the paragraph. As a result, the reading skills of the students were passive. The students did not read for complete comprehension but for the right answer. This causes them to develop their dislike of English and to leave the school with no increase in their reading ability.

To sum up, at the secondary level, the students were not trained in any reading techniques to promote reading performance. To assist the first year nursing students to be sufficiently able to comprehend information from the texts, they must be provided with adequate reading techniques and a high degree of skill in applying such techniques. Thus, it seems reasonable for this study to determine whether the outlining technique can affect and enrich the first year nursing students' reading comprehension.

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Significance of the Study

The current study was designed to determine the effectiveness of the outlining technique on the reading comprehension skills of the first year nursing students at Mahidol University. It was expected that the results obtained will be useful in the following ways:

1. They may be useful to English teachers who teach appropriate reading techniques.
2. They may demonstrate the strengths and weaknesses of the application of the outlining technique and the students' reactions to this particular approach.
3. The results of this experiment may provide some guidelines for future relevant research.

Scope and Limitations of the Study

In this study, there were several points to be considered as follows:

1. The subjects in this study were first year nursing students studying an English course at Salaya Campus, Mahidol University, Bangkok, Thailand.
2. The number of low- and high-reading ability students in both groups was identical.
3. Their age, sex, economic and social statuses were not important for this study.
4. The experiment was conducted in the first semester of 1998, from June to October 1998 Because of time limitations, it lasted only 11 weeks (three 50-minute periods per week).
5. The two groups (a control group and an experimental group) were both instructed by the investigator. Both groups used identical materials, but they were instructed using two different reading techniques The experimental group was taught using

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the outlining technique. The control group was taught using a product-oriented approach.

6. The reading materials and the questionnaire were designed by the researcher and related to the objectives of the syllabus: enabling students to read and understand a variety of texts and to transfer and apply the information therein
7. The test used as a pre- and post-test for both groups was constructed by the researcher.
8. The pre-test and the post-test were the same test.
9. The generalizations from the results in this study were limited to any situations where the students had different background knowledge level.

Basic Assumptions

In this study, it was assumed that:

1 All subjects in both groups were representative of the first year nursing students at Mahidol University.

2. The subjects had the same English reading proficiency since they studied English for at least eight years.
3. They responded honestly to all the questionnaire items concerning their attitudes towards the outlining technique.
4. The pre-test had no crucial effects on the post-test score.

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Purpose of the Study

To examine the effectiveness of the outlining technique on reading comprehension of first year nursing students, the attitudes of the students towards this technique were ascertained through a questionnaire. This study also attempted to do the following:

1. To determine the reading comprehension improvement of students learning through the outlining technique.
2. To determine the reading comprehension improvement of students learning through the product-oriented approach.
3. To compare the reading comprehension improvement of students learning through the two different reading techniques: outlining technique and product-oriented approach.
4. To compare the reading comprehension improvement of students in groups of low- and high-reading ability in both the experimental group and the control group.
5. To investigate the students' attitudes towards the outlining technique.

Research Questions

This study was to answer the following research questions:

1. Is there any significant difference in reading comprehension improvement after the first year nursing students are taught through the outlining technique?
2. Is there any significant difference in reading comprehension improvement after the first year nursing students are taught through the product-oriented approach?

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3. Is there any significant difference in reading comprehension improvement of the first year nursing students before and after they are taught with the two techniques: outlining technique and product-oriented approach?
4. Is there any significant difference in reading comprehension improvement of the first year nursing students in groups of low and high reading ability with the two techniques?
5. What attitudes are formed by the first year nursing students who use the outlining technique?

Definition of Terms

1. Outlining technique — It is a reading strategy that focuses on the production of well-organized ideas and the recognition of the main idea, supporting information and organizational patterns. The activities used in this study were a) making a prediction in relation to the title of the passage studied b) underlining the important issues found in the passage c) identifying the main ideas and supporting details and d) summarizing what they read by writing an outline (Sola 1996: 48).

2. Product-oriented approach — It is an approach of reading which is concerned with what the reader has taken out of the text, the text is seen as an object from which meaning can be extracted (Wallace 1992: 149). In each session,

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	students read the passage, and the researcher explained the unknown words and difficult structure, if any. Then, they orally answered the questions and exercises below the text.
3.Pre-test and post-test	The English reading comprehension and vocabulary test was constructed by the researcher. Students from both groups were tested together on both the pre-test and post-test. The pre-test was given to the students prior to teaching the course. The post-test, the same test as the pre-test, was given to the students at the end of the experiment.
4. Experimental group	The sample population of 30 students which was taught using the outlining technique.
5.Control group	The sample population of 30 students which was taught using the product-oriented approach.
6. Subjects	60 first-year nursing students at Mahidol University.
7. Reading Comprehension	In this study, reading comprehension is defined by the following: 1. The ability to identify and understand the main idea of the passage. 2. The ability to identify the supporting details of the passage. 3. The ability to categorize items of actual

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information.

4. The ability to make inferences from the information given.

5 The ability to interpret the purpose of the writer.

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CHAPTER II

REVIEW OF RELATED RESEARCH AND LITERATURE

The purpose of this research was to investigate the effectiveness of the outlining technique on English reading comprehension of the first year nursing students at Mahidol University. In this chapter, some research literature concerning the following areas will be reviewed:

1. Three models of second language reading comprehension
2. The use of classroom activities in second language teaching and learning
3. The material aids in second language teaching and learning
4. The reading activities in the outlining technique

1. Three Models of Second Language Reading Comprehension

Reading is one of many human activities which people mostly use in their everyday life as "a process of perceiving and understanding written language" (William 1996: 183). People can acquire knowledge of any professional area through reading skills. For students, particularly in situations where English is not a native language (Carrell 1988), reading English is obviously crucial to their academic studies, professional success, and personal development (Ward 1980). However, these students seem to read with less understanding than one might expect (Anderson 1984:1). Current methods of teaching reading in many schools and universities focus

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on the product-oriented approach. The teachers concentrate on reading tasks with a series of passages and questions provided to the students The students concentrate on answering the questions by copying the answers from the reading passages without real understanding of the whole text (Zaher 1987. 36). As a result, the students become the classroom "answer machines" (Cummings 1981: 160) and do not develop skills for effective reading to understand the passage (Zaher 1987: 36). Researchers in second language education should be vitally concerned with reading approaches that can improve the reading skills of ESL students in an effective way.

Generally, there are three basic models of ESL reading comprehension that have been recognized and researched: bottom-up, top-down and interactive models.

Bottom-up is a method primarily used in ESL classroom instruction (Carrell 1987: 416). Cambourne (1979) cited in Nunan (1991) says that, in the bottom-up model, readers start their reading by processing and matching each letter as it is encountered with the phonemes of the language. These phonemes are then combined to form words and meaning respectively (see Figure 1).

Print → each letter → phonemes → word → meaning

Figure 1: The model of the bottom-up process

Barnett (1989: 13) supports the view that readers begin with the written text by constructing meaning from letters, words, phrases and sentences contained in the text. The readers continue this process in a linear stage until they comprehend the text (Barnett 1989: 13). Carrell and Eisterhold (1988. 46) assert that reading in this processing is hierarchically organized from the most general data to the most specific knowledge. This model is a lower-level process called data-driven.

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The top-down model is a higher-level process. Goodman (1975: 260-266) describes reading in this model as "a psycholinguistic guessing game" which refers to the process of the interaction between thought and language. He says that reading processes are cycles of predicting, sampling, confirming and correcting. First, readers make a prediction by using their knowledge of the language and supplying semantic concepts to get meaning. Then, they sample the print to confirm their prediction. After sampling, they confirm and correct their guesses to get meaning (see Figure 2). This model is called conceptually-driven.

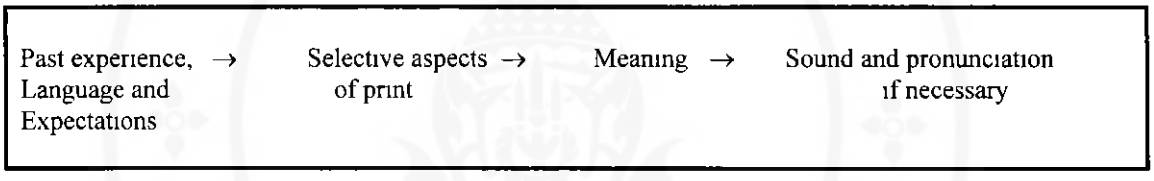

Figure 2: The model of the top-down process

However, both models have some shortcomings (Starnovich 1980). Cambourne (1979) cited in Nunan (1991) and Smith (1971) argue that, under the bottom-up model, readers would forget the beginning of a sentence before they have reached the end. The readers fail to comprehend the text and become passive readers since their expectations about the text are not utilized (Eskey 1973). Concerning the top-down model, Samuals and Kamil (1984: 32) point out that the relationship between the background knowledge and comprehension is not linear. Readers may misinterpret the text if they have little knowledge of the topic. Even if they are skilled learners, they will take a large amount of time to generate a prediction rather than taking time to recognize the words. Furthermore, if the readers make too many assumptions, they may lose the details. Readers who rely on either process may encounter comprehension problems.

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In the light of the deficiencies of both bottom-up and top-down models, a new model to compensate for their limitations is proposed. This new model is termed the "Interactive model" (Rumelhart 1980). This approach has an interacting hierarchical stage which allows processing at one level to interact with processing at another level (Carrell and Eisterhold 1988:9). It is a combination of top-down and bottom-up processes (Grabe 1988) and the interaction between readers' background knowledge and the text (Carrell and Eisterhold 1988): see Figure 3.

With reference to the combination of the top-down and bottom-up processes, the readers decode individual linguistic units (e.g., phonemes, graphemes, words), build textual meaning from the smallest units to the largest, and modify preexisting background knowledge and current predictions on the basis of information encountered in the text. In the top-down process, the readers make predictions about the text based on their prior experience or background knowledge, and then they search the input information to confirm or refute those predictions (Carrell and Eisterhold 1988).

From the view of the interaction between the readers and the text, reading comprehension depends on the readers who are able to relate information from the text to their background knowledge (Grabe 1988).

McNeil (1984: 9) describes the role of background knowledge in reading comprehension as "the complicated elements used by the readers to define the purpose of reading, identify the organizational patterns of the materials and interpret the key concepts in the text". Rumelhart (1980: 33-34) states that the readers use background knowledge to access new information, situations, actions and events.

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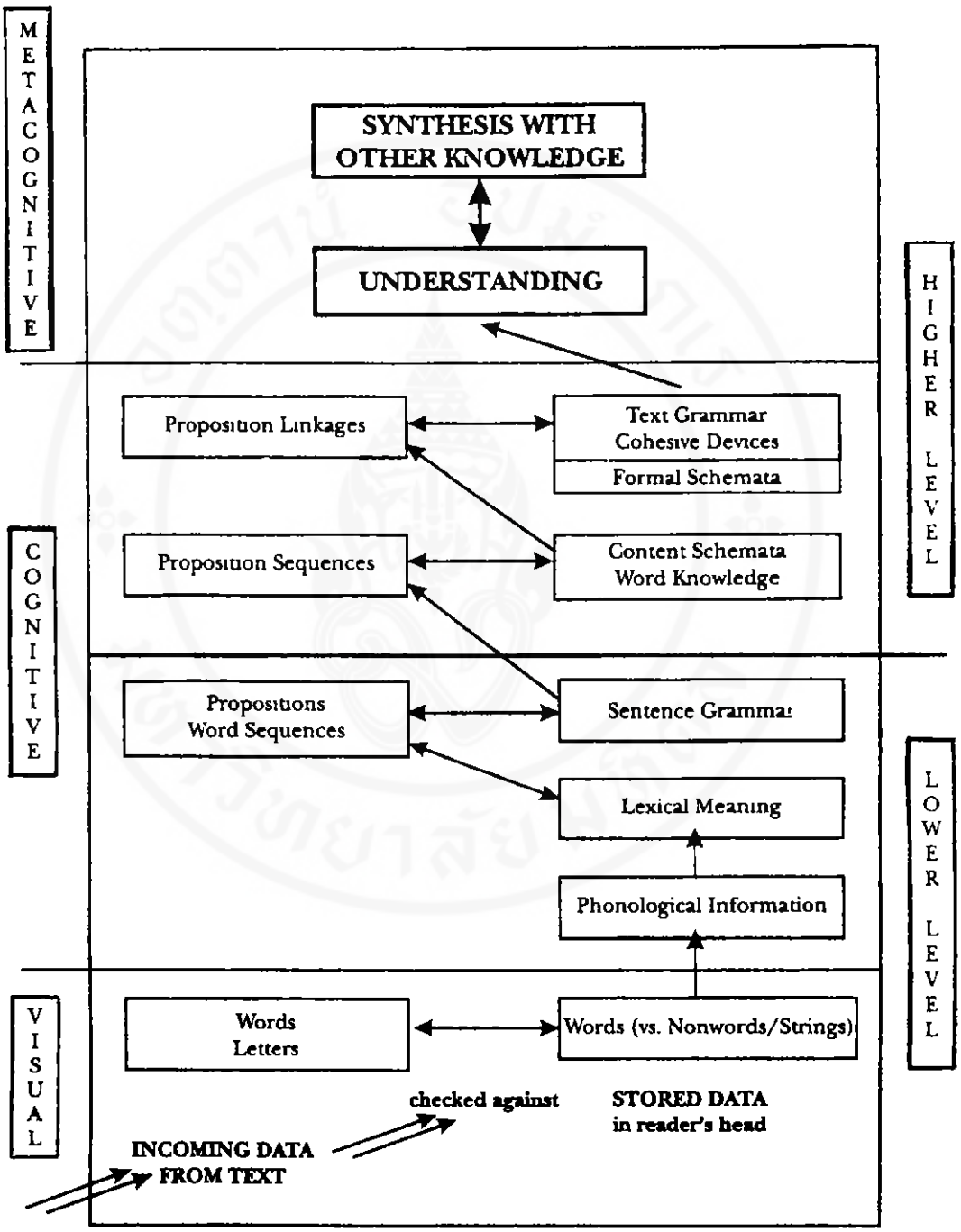

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Figure 3: The model of the interactive process

In order to retrieve the knowledge and have a complete understanding of the meaning of a text, Carrell (1987) identifies two types of readers' background knowledge. content and formal schemata.

Content schemata mean background knowledge of the content area of a text (Carrell 1987: 461). Content schemata are the reader's world knowledge that relates to the content domain of the text. Concerning the study of the content schemata, Johnson (1982) points out that the readers who are familiar with the content of a text can understand better than those who are less familiar with text content. In addition, Hudson (1982) investigated the effect of content-induced schemata on second language reading comprehension and found that activating the content schemata is helpful in reading comprehension, particularly for less proficient readers. The readers are able to incorporate information from the text. In this way, they are better able to anticipate and interpret when they are asked to read the materials.

Carrell (1988: 80), on the other hand, argues that there are some limitations of content schemata that cause the readers not to understand the text. First, the writers do not provide sufficient clues for readers. Second, the writers provide sufficient clues but the readers fail to understand the text since they have insufficient content knowledge and readers' cultural background knowledge also has an impact on reading comprehension (Johnson 1982).

Parry (1996) explained the relationships between culture, literacy and second language reading comprehension. The subjects in her study were two groups of students· secondary school students in northern Nigeria and university graduates in China. Based on the results of interviews with her students, she found that Chinese graduate students tended to use a word-by-word translation approach whereas

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Nigerian secondary school students used a top-down method in solving reading problems. They did not use translation as a technique for reading comprehension but they spent time talking in their second language with people who were using a second language themselves. Parry concluded that these two groups have different reading strategies; however, cultural background knowledge is an important factor that should not be ignored The present researcher also agrees with Parry, that understanding readers' cultural background knowledge is very important for reading comprehension.

Formal schemata refer to background knowledge of the formal, rhetorical organizational structures of different types of text (Carrell 1988:85): the readers' knowledge of how authors structure their ideas. According to McGee (1982) and Taylor (1980), mentioned in Hague and Scott (1994: 343), readers who use a text's structure can retrieve more information than readers who are not aware of text structure. Furthermore, Raymond (1993) notes that the text' s structure is used to help second language readers recall information This supports the theoretical notion that the knowledge of formal schemata plays a crucial role in reading as it facilitates learning from the text.

Several theorists studied the effects of formal schemata on reading comprehension. For example, Carrell (1984) investigated the effect of four different types of rhetorical organizations: description, causation, comparison and problem-solving in ESL reading. The results showed that text organized in causation, comparison and problem-solving can aid the readers to understand more than text organized in description. Later, Carrell (1985) studied the explicit teaching of texts structured on ESL reading comprehension. It was found that if the readers possess appropriate formal schemata, they can retrieve more information from the text Thus,

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the results of these studies clearly indicate that a teaching approach focusing on the rhetorical organization influences reading comprehension.

Regarding the importance of background knowledge in reading comprehension, many English educators (Barnett 1932, Adam and Collin 1979, and Rumelhart 1980, and Carrell and Eisterhold 1988) conclude that the ability to relate textual materials to one's own knowledge is required for efficient reading comprehension.

Coady (1979) develops a model of efficient reading comprehension in which readers' background knowledge interacts with conceptual abilities and process strategies in order to comprehend the text as follows:

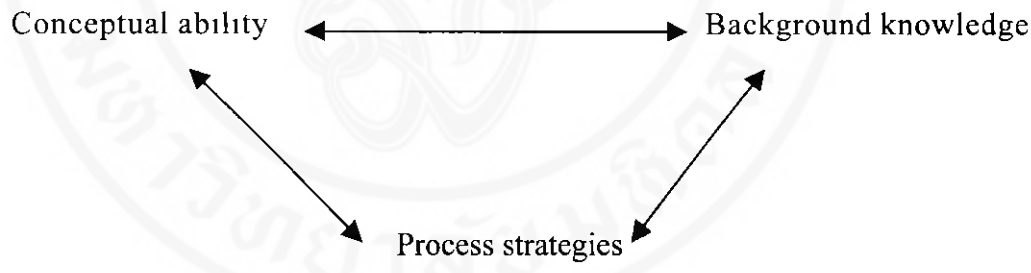

Figure 4: Coady 's model of ESL reading

In Coady's model, efficient reading depends on the interaction of these three factors. Conceptual ability is general intellectual ability such as the ability to analyze, synthesize, and infer. Process strategies are defined as the abilities and skills to reconstruct the meaning of the text through the knowledge of phonology, structure of language and semantic systems. Coady observes that background knowledge is an important variable which allows readers who have western background knowledge to learn English faster versus those who do not have the same exposure.

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According to Coady, readers understand a text through the intersection of these three important factors. He also states that, importantly, the reader can comprehend the text if they have adequate interest and background knowledge.

In the light of the above information, the present researcher agrees that helping students with both content and formal schemata is necessary for improving their reading ability. However, schema availability alone is not a sufficient condition for adequate comprehension (Carrell and Eisterhold 1988: 103). Instruction used in the classroom is also important to help students monitor their reading process (Garner and Taylor: 1982). The following is a description of classroom instruction in second language learning and teaching.

2. Classroom Instruction in Second Language Teaching and Learning

The ultimate goal of ESL reading teachers is to minimize reading difficulties and to maximize comprehension (Carrell and Eisterhold 1988). In order to reach this expectation, two viewpoints of classroom instruction will be outlined. group instruction and self-instruction.

Group-instruction is defined by Johnson and Johnson (1988) cited in Abson (1994) as "...two or more individuals in face-to-face interaction, each aware of his or her membership, each aware of the other who belong to the group and each aware of their positive independence". Mills(1967:2) cited in Read (1982: 1) claims that group-instruction is a unit composed of two or more persons who make contact with each other for a meaningful purpose In other words, group instruction is a technique that establishes a good relationship among students to interact with each other.

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Encouraging students to be responsible for their work can increase positive attitudes and motivation of the students.

Brown (1982) advocates the usefulness of group instruction. He explains that group instruction increases interaction of students in the group as it provides maximum opportunity for students to practice the target language together and help each other Group instruction therefore encourages group responsibility and shares experiences and information. Students in groups check each other's written work which then becomes a group responsibility. This encourages the students to look for their own mistakes and those of others, reduces the amount of correcting the teachers need to do and supports the students in sharing their experience and information to complete the task. Group instruction fosters interest and allows for different learning styles. Because the classroom is composed of students who have different strengths and weaknesses, they need to be directed learners and learn in an area that interests them.

Like Brown, E.J. Krigas (1980: 42) favors group activities as the fundamental tool for the learning process. He says that group work allows the students to feel confident in expressing their ideas and accept other ideas in order to get an acceptable conclusion in relation to the solution of the given situation. It also minimizes the individual competition among group members. This is because as they work, they feel responsible for their final product. In group instruction, the role of teacher differs from the traditional one. The group structures minimize the teacher's role. The teacher is a facilitator or supervisor who gives final approval for all work completed, gives feedback on students' progress and supports the students' interaction.

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Similarly, Rubin (1987. 2) states that group work is a meaningful process where students can handle difficult materials and abstracts much better than individual students. The students obtain a more complete understanding since they have to listen to and discuss with peers to get the best conclusion. Weak students become more active learners than they usually are.

Celce-Murcia (1980: 2) integrated group work with teaching of grammar. It was found that many students who will not participate in a conventional class will tend to work better in groups. The students also accept the explanations, corrections and suggestions from peers more readily than from the teacher. Group activities are then more effective because students can remedy weaknesses among themselves and this makes them feel more confident in their ability.

Since the aspects of group activities can help students improve their learning, Read (1982) recommends two types of group activities. Casual grouping is a process in which students have to get into new groups every time as a temporary group. The group is dissolved when the task assigned by the teacher is finished.

Fixed grouping, on the other hand, is a process in which students remain in the same group for a period of time. It has many advantages First, the teacher can keep track of individual performance within the group. Second, the teacher can monitor the students' roles in the group in order to eliminate the problem of over-dominance. Third, it can minimize the time and noise (Read 1982:6-7). Each member is responsible for learning the tasks together, helping each other. They are encouraged to explain ideas or skills to one another.

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Furthermore, Read (1982) who sees the group activities as a means for improving language learning suggests guidelines for teachers to have students work in groups

1 The teacher must explicitly state instructions for carrying out a task and for approaching a task before letting the students work in the groups in order that they are not distracted or annoyed when they are working.

2. The teachers must design a task that involves every member of the group so that the students can exchange and negotiate the meaning.

3. The teachers themselves need to provide appropriate time for the entire activity.

With regard to the effectiveness of group activities in second language learning, a number of studies have been conducted to illustrate the results of group activities in classroom.

Gunderson and Johnson (1980) investigated students' attitudes towards using cooperative learning groups. Two classes of junior high beginning French classes of 30 students each were reorganized into groups of five or six students. Each group was responsible for completing every assignment. Group members helped one another understand assignments. Intergroup competition was used to add interest and enthusiasm to every kind of activity To evaluate the effects of the cooperative learning experiences on students' attitudes, a questionnaire was given to each student at the end of the course. The results of their study revealed that all students enjoyed learning French in cooperative groups. 96 percent of the students revealed that they worked together to help each other learn. Besides valuing cooperation, students indicated considerable personal benefit from working in the cooperative groups.

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Bejarano (1987) assessed the effects of small group cooperative techniques in the language classroom. A total of 665 seventh-grade pupils were subjects of this study. They were divided into small groups of two to six students in order to fulfill a learning task cooperatively. Some groups were instructed by cooperative small-group learning methods while the others were instructed by the whole class method. This study was designated for one semester. The results revealed that students in small-group methods significantly outperformed in the whole-class method on the listening comprehension test.

Slawin and Tanner (1987) studied the effectiveness of reading in three groups: The first group involves pair work: the students read a passage, discuss, practice asking and answering questions together. The second group of students reads the passage together but answer the questions alone. In the third group, each student reads and answers the questions alone. The results showed that post-test scores on reading test items of students in the first group outperformed those in the second and third groups.

The present researcher agrees that using group work in the language classroom increases the quantity of language practice, improves the quality of student-to-student communication, creates a positive climate in the classroom, and increases student motivation. Milleret (1992) and Read (1982); however, object to the use of group work in the language classroom because it is time-consuming. The teachers do not see their students making progress. Some members of the group do not stay on task and do a minimum amount of work so as to finish the task quickly. Others remain passive and uninvolved throughout the activity. As a consequence, self-instruction is proposed as the essential factor in successful language teaching and learning.

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Self-instruction is defined by Dickinson (1994: 11) as " a situation in which a learner is working without the direct control of a teacher for short periods within a lesson or for the whole class." In other words, the learners plan and undertake their own learning with minimal help from the teacher. Dickenson (1994: 45) also states that using this method in reading class provides the greatest advantages, that is, students can work at their own pace and they are free to consult individually with the teacher throughout the class period. West (1964) supports the view that, most importantly, students need to have time to sit quietly and read materials without interruption. They consult their teacher when they encounter difficulty. They eventually learn to read by reading.

Although comprehension is the main goal for all readers, the strategies used for achieving that goal are different. Students have different attitudes, expectations, and preferences and learn in different ways (Nunan 1991, and Victoria and Lockhart 1995). Their reading abilities vary. In order to help students achieve their own learning, the concept of metacognition is taken into account.

Victori and Lockhart (1995: 224) define metacognition as "the general knowledge assumptions that students hold about themselves as learners, about factors influencing language learning and about the nature of language learning and teaching". Flavell (1979: 906) adds that metacognition is "learning how to learn" which consists of four elements: metacognitive knowledge, metacognitive experiences, goal and tasks, and action and strategies.

1. Metacognitive knowledge refers to what the learners know about their learning.

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2. Metacognitive experiences are the appropriate learning strategies, the kinds of activities, and learning experienced strategies used by the learners to learn a foreign language.
3. Goals or tasks refer to the objectives of cognitive activity.
4 Action or strategies refer to the strategies that the individual learners use for achieving their aims.

Based on the four elements, learning a foreign or second language is a matter of developing metacognitive knowledge. The learners have to discover appropriate learning strategies through trying out different activities, and through trying out strategies from other learning experiences. Results will be stored as metacognitive knowledge and metacognitive experiences. In support of this view, Victori and Lockhart (1995: 224) state that both metacognitive knowledge and metacognitive strategies are necessary in second language learning.

Because the reading process is an individual process that takes place inside readers' minds (Aebesold and Field 1997), Scott and Foreman (1984) suggest three areas that are essential to language learning: self-knowledge, task-knowledge and self-monitoring.

Self-knowledge is a personal recognition of one's strengths and weaknesses during learning. Task-knowledge refers to the insights learners have into what they are doing, why they are doing it, and how they should do it. Self-monitoring is the element of metacognition that oversees how well everything is working during learning.

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According to Scott and Foresman (1984), in order to become better readers, students need to control their own reading process through careful analysis of the task.

They should be guided to rely on their own knowledge and skills to comprehend what they read and learn strategies that will enable them to perform tasks independently.

However, the strategy used to develop reading comprehension is different in skilled and less skilled readers. Jacabowitz (1990: 620) states that less skilled readers are passive and rely on finding the main ideas in the text rather than on constructing it, whereas skilled readers applied prior knowledge and knowledge accumulated from the text to construct the ideas.

Flavell (1979: 908) provides three steps in the reading process to train students to become strategic readers as follows:

Before reading, the readers preview the text by looking at the title, the pictures and the print in order to evoke relevant thoughts and memories. The readers build background by activating appropriate prior knowledge about what they already know about the topic, the vocabulary and the form presented.

During reading, the readers check understanding of the text and monitor comprehension by using context clues to figure out unknown words. The readers integrate new concepts with existing knowledge and revise purposes for reading.

After reading, the readers summarize what has been read and evaluate the ideas obtained in the text. Finally, they make applications of the ideas in the text to specific situations

According to Flavell, in order for readers to succeed in their self-instruction, they combine the various skills to the establishment of purpose, pre-reading, activating of background knowledge, prediction, determine of text organization and critical evaluation into their reading strategies.

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From the above, it can be concluded that to help readers increase their academic success and motivation, they practice their reading habit by planning, monitoring and evaluating their own understanding in the process of reading.

3. Material Aids in Second Language Teaching and Learning

Language learning is a complex process and teaching aids are designed to help learners learn better and more efficiently. There are a variety of teaching aids used in the classroom. One of the most useful and flexible aids found in almost every classroom is the whiteboard or blackboard.

Yanus (1981: 5) recommends a few principles of blackboard use which are essential for ESL teachers. He explains that the hand-writing of the teachers must be legible. The size of the letters should be appropriate to the size of the class and the size of the board so that the students can see and understand what the teachers have written on the board without difficulty. The teachers must check all written work, use colored chalk to highlight important issues and erase any unimportant issue which may result in the misunderstanding of the students. The teachers must clean the board at the end of the lesson. The understanding of these principles will help teachers use the board effectively.

Mugglestone (1980:32), Yanus (1981: 6), Flavell (1982: 52-55), and Gower and Walters (1983: 160) advocate the significance of blackboard use in the classroom. They point out that the blackboard can be used for various skills such as explaining structure and grammar, presenting new vocabulary and practicing dialogues. In addition, the blackboard increases both teacher and student interest. The teachers plan to present the lesson in advance and decide which part they are going to allocate to

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which use. As a result, the students pay more attention to what the teachers are writing The teachers can immediately erase or rewrite and change the new information received from the students because they will not be distracted or confused.

Using the blackboard also has its limitations. Writing on the board is time-consuming and teachers have to turn their back to the class for long periods of time. Many students then lose interest in what the teachers are writing (Wright 1976 and El-Araby 1974). Thus, the overhead projector then becomes a better alternative to the blackboard.

The overhead projector offers various advantages. It is easy to operate and maintain. It helps teachers save time during the lesson: the transparencies are prepared beforehand and used many times. The teachers do not turn their backs to the class to operate it because it is placed in front of the class. The teachers can observe the reactions of the students. The students can work with one another and with the teacher. The teachers can pause to underline, circle or question the important issues in the text while they are explaining the lesson (Yanus 1982: 8). The overhead projector does not have to be cleaned and allows the teacher to present a new set of ideas just by changing the transparencies. (Haycraft 1978: 109).

Regarding the usefulness of the overhead projector, Wright and Haleen (1984: 27) claim that teachers can adapt and enlarge the size of the letters to be suitable for the class by changing the distance between the projector and the screen. Moreover, the texts or pictures on the transparency can be easily modified to facilitate better understanding of the students. Pfanner (1984: 120) states that the overhead projector is useful for promoting group instruction since the members of groups can discuss and

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prepare their work more carefully. The teachers also use transparencies to keep track of the students' progress

Flavell (1982: 75) further illustrates the characteristics of the overhead projector in language learning, saying that the overhead projector is extremely useful in teaching language skills. In reading class, the reading process has emphasized the role of prediction that is necessary to activate or build up the readers' background knowledge. In this case, the overhead projector is used to present their hypotheses about the possible continuation of the text and identify the general content of the text. The students also develop their presentation skills by learning various ways to use the overhead projector

Material aids in language teaching and learning help to increase the learners' comprehension and interest. The teacher must select the appropriate material aids with careful planning and use in order to achieve the maximum advantage and effectiveness.

4. Reading activities in the outlining technique

This section describes the reading instructional process of the outlining technique in three phrases: pre-reading activities, while-reading activities and post-reading activities. Each of the stages used in this technique has its own particular aims and procedures.

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Pre-reading activity

The aims of pre-reading activities are to relate the readers' prior knowledge to comprehension, to seek students' involvement, interest and motivation as well as to provide language preparation (Rivas 1997:13). Several techniques are suggested to achieve this goal.

Text surveying and previewing is a technique used to predict what the text is about. Dutta (1994: 36) suggests that title, heading, subheadings, pictures, captions and introductory statements are used to form the prediction for the content in the pre-reading stage. This technique helps learners focus their attention on the topic of the text, generates learners' interest in the text, and encourages the learners to employ their imagination, intelligence and experiences of the world to guess what they may find in the text. Hudson (1982) studied the advantages of prediction in the pre-reading stage by giving two different types of pre-reading activities. One group is given an activity that generates a prediction about what they expect to find in the text by analyzing the title or picture while the other is given an activity that focuses on the meaning of vocabulary items. The results show that the students in the former group can understand the text better than those in the latter. It supports the theory that prediction can stimulate learners to think about the content of the topic they are reading and understand the text more.

Brainstorming and mapping is another type of pre-reading activity to enrich learners' background knowledge. The teachers do not spend too much time in preparation. It urges the learners to bring their own prior knowledge to the text and encourages learners to participate in discussion within a group or the whole class (Wallace 1992: 91).

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Pre-questions and suggestions prior to reading are one of many pre-reading activities used in the reading classroom It promotes learners' discussion. This activity makes them think about the text, and then discover the information of the text (Melendez and Prichard 1985)

While-reading activity

The main goals of while-reading activities are strategy and skill practice, and linguistic development, as well as helping learners understand the writer's purpose, the rhetorical structure of the text and content (Rivas 1999: 16). The activities in while-reading activities encourage the learners to be flexible, active and reflective. Several techniques that help to achieve these goals are recommended.

Questioning before reading is the simplest technique to direct learners' attention to the major ideas of the text This activity encourages the learners to think about what information is important (Wallace 1992: 101).

Underlining is another technique which focuses learners' attention on what they are reading as they need to think about the idea when they are deciding what to underline (Wiener and Bazerman 1978, Karlin 1975, and Amer 1994). Dubin et al. (1986: 118) support the idea by saying that second language readers should learn to mark or highlight the text in order to facilitate study of the important facts and ideas.

Considering syntax and sentence structure used in while-reading activity is also necessary. Barnett (1989: 129) points out that the teacher should teach the learners to use syntax and sentence structure to predict the text. For example, "but" signals contrast, "first, next, afterwards" signal time sequence and "consequently, because of" signal cause and effect.

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Post-reading activity

The goals of post-reading activities are to help learners consolidate what they have read and to relate the text to the learners' experience knowledge and opinions (Rivas 1999: 18). To achieve these objectives, different activities are proposed

One of the most frequent activities is the use of comprehension questions. A text comprehension question can cover various aspects of content: the main ideas of the text, various specific details, and the difficult parts. It can also focus on language: particular rhetorical structures, grammar pattern and vocabulary. A set of comprehension questions found at the end of the reading text can focus on one type of question or it can combine types of questions. The multiple-choice and open-ended questions are suitable to evaluate and justify their comprehension (Wallace 1992, Melendez and Prichard 1985). The students can write the answers or state the answers. To promote the process of finding the answer, the teachers asks learners to answer individually, discuss individual answers in small groups and each group discusses with the whole class

Another technique of post-reading activities is writing an outline. It is an organizational skill that would help the students to think more clearly and logically as they have to organize their ideas and understand the information they read (Langan 1988). Anna (1996) suggests that this technique can help some inexperienced students in building confidence when reading. It also helps the students feel confident in discounting irrelevant information, and visualizing organizational patterns and relationships between ideas. Karlin (1975: 151) also claims that, by using this technique, the students can easily recognize the main ideas and their related details and

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see the distinction between one level and another. They eventually develop their reading comprehension

Another post-reading activity to review reading is to have students write a short summary in class (Richards and Lockhart 1998: 123). The teacher can get a general idea of the classroom's reading comprehension as a whole and of how individual students compare with one another. In this way, summary writing activity is primarily an informal assessment tool of students' comprehension.

Based on the activities in the outlining technique stated above, it is found that the purpose of teaching reading is not to assign the students a text and ask them to answer a series of comprehension questions when they have finished (Dubin and Bycina 1991: 202). The students may become passive readers. The teachers determine the instructional framework so as to empower students to understand the information from the text. Thus, outlining is considered an important technique that leads the students to the development of reading comprehension. At a pre-reading stage, the students are encouraged to apply their preexisting experience to interpret what they will read While–reading, the students consult with each other to underline the important information found in the text. This stage promotes good relationships between the students and encourages the students to become strategic and active readers. Finally the students make an outline of the passage. All of these reading activities are parallel with the theoretical perspectives of reading process.

This study was conducted to determine the effectiveness of the outlining technique on reading comprehension of first year nursing students at Mahidol University. It is expected that the outcome of this study can direct the students to

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become independent readers and acquire more and more additional knowledge by themselves.

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CHAPTER III

RESEARCH METHODOLOGY

The procedures used to answer the research questions asked in Chapter 1 are detailed in Chapter 3. This chapter presents the profile of subjects and the sampling procedures, research design, research instruments, and statistical devices used for analyzing the data obtained.

1. Population

The target population was 518 first year nursing students. They were nonnative speakers of English who had studied English for at least eight years in secondary schools. All enrolled in the Freshman English course at Mahidol University in the first semester of academic year 1998. The 518 students were divided into two groups: 158 nursing students from the School of Nursing, Ramathibodi Hospital and 360 nursing students from the Faculty of Nursing, Siriraj Hospital. The 360 Siriraj nursing students were subdivided into eight groups: 45 students in each group. The 158 Ramathibodi nursing students were subdivided into three groups. The initial group of subjects in each group was composed of 52 students. However, only 45 Ramathibodi students participated in this study. 7 students were not included: 3 students withdrew from their study and 4 students missed the class. 60 students were selected as

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subjects for this study. 15 students in each group were excluded because their pre-test scores could not be paired. Some of these missed the test.

Sampling procedures

Two groups were randomly selected from eleven groups of first year nursing students. One group was taken from Ramathibodi nursing students while the other was taken from Siriraj nursing students. At the onset of the training, all 90 participants took a pre-test in order to discriminate their levels of reading ability. Based on the scores of the pre-test, only 30 pairs (30 students in each group) were used in this study as their pre-test scores were comparable, as shown in Table 3.1 below.

Student Pair	Scores obtained from pre-test (50) (Ramathibodi nursing students)	Scores obtained from pre-test (50) (Siriraj nursing students)
1	33	34
2	30	30
3	28	29
4	27	27
5	26	27
6	26	26
7	26	26
8	25	26
9	25	25
10	25	25
11	25	25
12	24	24
13	24	24
14	24	24
15	23	23
16	23	22
17	22	22
18	21	21
19	21	21
20	21	21
21	20	20
22	19	19
23	19	19
24	18	18
25	17	18
26	17	18
27	17	17
28	16	17
29	14	15
30	13	13
X	22 3	22 5

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Table 3.1: The pre-test scores of Ramathibodi and Siriraj nursing students

The students in both groups were identified by their reading ability. Using criteria of 50 percent method of discrimination, the students who received 34-22 were judged as high-reading ability students and those with marks of 21-13 were considered as low-reading ability students. Because of scoring overlap, the researcher made the broad assumption that the range of number of low- and high-reading ability students was likely to be similar – not identical. Thus, each group consisted of 17 high-reading ability students and 13 low-reading ability students rather than 15 high-reading ability students and 15 low-reading ability students as shown in Table 3.2 below.

Ability levels	**Test scores**	**Number of subjects**	
		Siriraj nursing students	**Ramathibodi nursing students**
High-reading ability	34-22	17	17
Low-reading ability	21-13	13	13
Total		30	30

Table 3.2: Scoring criteria and number of students in each group

Finally, the two groups were randomly assigned to two treatment groups: a control group and an experimental group. Since both Siriraj and Ramathibodi nursing students had the same probability of being in either the control or the experimental groups, internal validity regarding selection of subjects for the different conditions was controlled as carefully as possible through randomization. The Siriraj nursing students were randomly placed in the experimental group while the Ramathibodi nursing students were placed in the control group The control group was instructed using the product-oriented approach and the experimental group was taught using the

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outlining technique. Each group contained 30 students who had an equivalent reading ability.

2. Experimental design

The data for this study were collected in the first semester of 1998. In order to ensure that subjects for both groups were likely to be at the same level of reading ability, a pre-test constructed by the researcher was administered to the students at the onset of the experiment. All subjects were instructed by the researcher in the regular English class for 11 weeks. The control group was instructed using the product-oriented approach and the experimental group was instructed using the outlining technique. However, they were given the same materials, namely "Nursing and the World", provided by the Department of Foreign Languages, Faculty of Science, Mahidol University.

In order to standardize the experiment, identical supplementary materials from scientific journals, *Chemistry & Industry, Science News, Nursing Times, Bangkok Post,* and *Mother and Child Magazine,* were used for practice in both groups. At the end of the experiment, a post-test (the same test as the pre-test) was provided to both groups so as to determine student progress in English reading ability.

Since the present researcher intended to determine the effectiveness of the outlining technique, a questionnaire concerning student attitudes towards this technique was administered to the experimental group at the end of the course. The experimental design is shown in Table 3.3 below.

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Group	Test	Reading Techniques	Test	Attitudes
Control Group	Pre-test	Product-oriented Approach	Post-test	None
Experimental Group	Pre-test	Outlining technique	Post-test	Questionnaire

Table 3.3: The experimental design

3. Research instruments

Two instruments were used to collect the data in this study. The first one was a multiple-choice reading test designed to measure students' proficiency in English reading comprehension The second instrument was a questionnaire constructed to elicit further information from students. The following are procedures used for developing the two instruments.

I. English reading achievement test

The English reading achievement test constructed by the researcher was employed as a pre-test and post-test for both sample groups. The rationale for using exactly the same test for both pre- and post-testing was to avoid the problem of equating different forms of pre- and post-test and to assure an exactly comparable test since the level of difficulty, discrimination power, and reliability of test-retest was equal. The interval between the pre- and post-test (11 weeks) was deemed long enough to control any short-term memory effects.

This test was composed of vocabulary items and five reading passages. The vocabulary part included 10 items. The reading part consisted of 40 items. Each item had 4 choices The five reading passages were extracted from different scientific journals such as *Bangkok Post, Nursing Times,* and *Science News*. Each passage was

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between 300-500 words long. This test was a multiple-choice type since this can be used as a measure at all levels of the cognitive domain: knowledge, comprehension, application, analysis, synthesis, and evaluation (Marshall and Holes: 1972). Ebel (1972: 187) also states that

> ...almost any understanding or ability that can be tested by means of any other item form – short answer, completion, true-false, matching, or essay – can also be tested by means of multiple-choice test items.

A separate answer sheet was used in this study. The students can score rapidly, accurately and efficiently. Marshall and Hales (1972: 19) state that, for a teacher, the use of a separate answer sheet allows a saving in scoring time and gives an increase in scoring accuracy.

Content validity, ambiguity and correctness of the language of the items were checked by two English instructors at the Department of Foreign Languages, Faculty of Science, Mahidol University.

Pilot Study

An experimental pilot of this test was administered to first year nursing students who were not in the sample groups. The students were allowed 2 hours to complete the test. The aim of the first pilot was to test the effectiveness of the test in terms of discrimination value, level of difficulty and reliability, and to decide how long subjects should be given to finish the test. The researcher found that the appropriate time needed for completing the test would be 1 hour and 30 minutes. In terms of discrimination value, level of difficulty and reliability, it was found that there

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were unfavorable items from the first pilot that needed to be revised, removed or developed to use in a second pilot. This revised test was administered to other students who were not subjects in the study. Any inappropriate test items from the second pilot were revised. Subsequently, this test was employed in the main study.

Test administration and scoring procedures

The test was administered to the students in both the control group and the experimental group at the outset and the end of the training. It was hand-scored. One point was given for each correct answer; zero for each incorrect answer.

Item analysis

After scoring the pilot test, an item analysis was conducted to obtain information on the discrimination value, level of difficulty and reliability. The accepted discrimination value was more than 0 30 and the accepted level of difficulty was from .20 to .80 (Wongsothorn 1996). The discrimination value and level of difficulty of the second pilot are shown in Table 3.4 below.

Reliability

Kuder Richardson formula 21 was used to determine the reliability. It was found that the reliability of this test was .75. According to Harris, the reliability of a teacher-written test should not be less than .70. Consequently, this test was employed as the pre-test and post-test in this study.

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Items	Level of Difficulty	Discrimination power	Items	Level of Difficulty	Discrimination power
1	33	.26	26	50	46
2	45	41	27	.40	.26
3	30	33	28	50	33
4	40	53	29	36	33
5	40	40	30	.43	.33
6	43	.46	31	.53	.53
7	.53	26	32	60	.40
8	62	41	33	.36	.33
9	33	40	34	46	.40
10	.43	.46	35	53	46
11	43	33	36	46	.66
12	36	46	37	40	40
13	30	33	38	.43	46
14	70	33	39	.56	.33
15	40	26	40	56	46
16	.63	.46	41	36	.33
17	.70	46	42	.50	.33
18	36	33	43	43	.33
19	56	.33	44	.40	40
20	.56	.60	45	.43	.33
21	56	.20	46	36	.46
22	50	.46	47	.33	.53
23	66	26	48	43	60
24	.53	40	49	.36	60
25	33	26	50	.46	36

Table 3.4: The level of difficulty and discrimination power of the test

II. Questionnaire

The questionnaires were designed to ascertain the subjects' reactions to the outlining technique. The purpose was to collect information that could not have been yielded by the tests. Students were specially told to be as honest as possible in filling out the questionnaire. A Likert rating-scale questionnaire was constructed by the researcher on the basis of literature and reviews found in professional journals. It consisted of four parts as follows:

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1. In the first part students were asked to fill out personal information (age, sex, level of English, and educational background) in the blanks provided.

2. The second part was the strengths of the outlining technique of 19 items. The five-point Likert scale used for rating their attitudes were as follows:

Very strongly agree	=	5
Strongly agree	=	4
Moderately agree	=	3
Slightly agree	=	2
Disagree	=	1

3. The third part was the suggestions for the outlining technique. It contained 13 items. The same rating criteria used for part two was employed in part three.
4. The final part concerns student evaluations of the level of reading comprehension. It contains 11 items. The rating scale used in this part was:

Totally understand	=	5
Mostly understand	=	4
Moderately understand	=	3
Slightly understand	=	2
Do not understand	=	1

The language used in this questionnaire was Thai in order to minimize word ambiguity and misinterpretation. This questionnaire was submitted to the research advisor in order to check the appropriateness of the content. The questionnaire approved by the research advisor was given to the students in the experimental class at the end of the course to survey their reactions.

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Pilot study

A pilot questionnaire was tried out with students who were not subjects in the experiment. The aim of this pilot study was to discover any ambiguous or misinterpretable items. Based on the results of the pilot study, the draft questionnaires were revised and developed according to the research advisor's recommendations. Alpha coefficient was employed to ascertain the reliability of the questionnaire using Statistical Package for Social Science Program (SPSS). The Alpha coefficient received from the pilot study was .89. Consequently, this questionnaire was accepted as the instrument in the experimental group.

4. Research teaching

The classroom procedures for both groups were carried out by the researcher based on the objectives of the course. The materials provided for both control and experimental groups were identical. The only significant difference was in technique: the outlining technique was used in the experimental group and the product-oriented approach for the control group. The teaching activities in three stages: pre-reading activity, while-reading activity and post-reading were presented as follows:

Lesson Plan for the Control group (Product-oriented approach)

Pre-reading activities

- The teacher presents difficult vocabulary and structure found in the text.

While-reading activities

- The students read the passage silently in groups or individually and try to understand as much as they can.

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Post-reading activities

- The teacher asks the students to answer the questions orally. Then they are assigned to do the exercises at the end of the passage and the whole class checks the answer with the transparencies prepared by the teacher.

Lesson Plan for the experimental group (Outlining technique)

Pre-reading activities

- The students work in groups and start forming a mental picture. They brainstorm and jot down a basic outline of the article they are going to read. They are asked to analyze the title and make predictions based on the information it provides
- As they share their ideas, the teacher goes from group to group monitoring and helps them to narrow down the topic.
- The students' guesses about the information categories are then written on a transparency and presented to the class.

While-reading activities

- The passage was given to the class.
- Each group reads the whole passage silently.
- As they read, the students will underline any information in the text that matches their predictions.
- They discuss what they have read and underlined in groups.

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Post-reading activities

- The students will rearrange the main idea and the information categories in logical sequence, from general to specific.

- Each group writes a revised outline of what they have discussed.
- The leader of each group presents an outline in front of the class.
- The students are given feedback on the appropriateness of their outline writing at the end of class

5. Statistical Analysis

Concerning the instruments used in this study, descriptive and inferential statistics were used in analyzing the results of the test. Item analysis was employed to examine the level of difficulty and discrimination power of the test. The level of difficulty was from .20-.80 while the discrimination power was equal to or more than .20. In order to determine the reliability of the reading test, KR-21 was computed. Student improvement in the use of two different reading techniques was compared by arithmetic mean. To determine whether there were any significant differences between the reading comprehension of the control and the experimental groups, a paired t-test was used

Regarding the data obtained from the questionnaire, Alpha coefficient was employed to examine the reliability of the questionnaire.

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CHAPTER IV

RESULTS

In this chapter, the data collected using the methods described in chapter III are analyzed. The results of this study are interpreted in the light of research questions stated in chapter I. Each answer is based on students' pre-test and post-test scores on English reading achievement administered by both the control group and the experimental group. The data from the questionnaire completed by the students in the experimental group are examined. For this research, reliability is significant at $p < .001$ level. A t-value is used to detect possible trends of the effectiveness of the outlining technique on reading comprehension.

The answer of each research question is presented as follows:

4 1. Finding one illustrates the results of an English reading comprehension improvement of the students in the experimental group.

4.2. Finding two reveals the results of an English reading comprehension improvement of the students in the control group.

4.3. Finding three describes the comparison of the English reading comprehension improvement of the students taught using the outlining technique and those taught using the product-oriented approach.

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4.4 Finding four presents the comparison of the English reading comprehension improvement of low- and high-reading ability students in both the control and the experimental groups.

4.5. Results from the questionnaires concern the experimental students' attitudes towards the outlining technique.

4.1. Finding One

Research question 1: *Is there any significant difference in reading comprehension improvement of the first year nursing students after they were taught using the outlining technique?*

To answer this research question, an English reading achievement test was given twice to the subjects in the experimental group as a pre- and a post-test. The mean scores obtained from the two tests were analyzed to determine whether there was any significant difference in reading comprehension after they were taught using the outlining technique. The scores calculated using a t-test are listed in Table 4.1.

Tests	N	Mean	S.D.	T-Value	P-Value
Pre-test	30	22 53	4 69	9.59	< .001
Post-test	30	29.90	3 67		

Table 4.1: The experimental group' s mean scores of pre- and post-test

Finding 1

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In Table 4.1, the resulting t-test scores (9.59) show that this analysis produced a significant result at the .001 level. The mean scores obtained from the pre-test were lower than those from the post-test. This finding suggests that the outlining technique

was an effective reading strategy that helped students in the experimental group increase their reading achievement.

4.2. Finding Two

Research question 2: *Is there any significant difference in reading comprehension improvement of first year nursing students after they were taught through the product-oriented approach?*

In response to research question two, the same multiple-choice English reading test used in the experimental group was given twice to the students in the control group: first as the pre-test and then as a post-test. The time between the two tests was 11 weeks. The scores obtained from the two tests were used to determine any development in their English reading improvement. The results were calculated and analyzed using a t-test. The results are presented in Table 4.2.

Tests	N	Mean	S.D.	T-Value	P-Value
Pre-test	30	22 3	4.61	11.52	< 001
Post-test	30	24.5	4.08		

Table 4.2: The control group' s mean score of pre- and post-test

Finding 2

As Table 4.2 illustrates, the result of t-value reveals that there is a statistically significant difference at the level of .001. There was a general increase in the mean scores obtained from the control students' pre- and post-test. This finding confirms that the product-oriented approach had a positive effect on reading comprehension that assisted the students in enhancing their reading ability.

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4.3. Finding Three

Research question 3: *Is there any significant difference in reading comprehension improvement of the first year nursing students before and after they were taught with the two techniques the outlining technique and the product-oriented approach?*

In order to determine which students, taught through two different techniques, showed more improvement in their English reading comprehension, the mean scores obtained from the post-test of both groups were compared by means of a t-test. The results of the comparison are presented in Table 4.3.

Groups	N	Mean	S.D.	T-Value	P-Value
Experimental group	30	29.9	3 67	2 90	< 001
Control Group	30	26 36	5 57		

Table 4.3: The comparison of the English reading achievement of the control and the experimental groups

Finding 3

As can be seen in Table 4.3, when the post-test mean scores of the control and experimental groups were compared using a t-test, it yields a significant difference at the level of .001. This statistical result indicates that the students in the experimental group who received the outlining technique performed significantly better in the English reading comprehension in comparison to the students in the control group who received the product-oriented approach.

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4.4. Finding Four

***Research question 4**: Is there any significant difference in reading comprehension improvement of the first year nursing students in groups of low- and high-reading ability with the two techniques?*

To investigate whether the high- and low-reading ability students taught with two different teaching techniques in the experimental and the control groups showed any difference in their reading improvement, a t-test was used to test for the significant difference. The results of the comparison are illustrated in Table 4.4.

Reading Ability	Control group		Experimental group		T-value	P-value
	Mean	S.D.	Mean	S.D.		
High	29.17	4.21	30.88	3 21	6.02	>.001
Low	22.69	4.38	28.69	3 94	3.62	< 001

Table 4.4: The comparison of the English reading achievement of the students of different English reading ability in both groups

Finding 4

From the data shown in Table 4.4, when performance of the low- and high-reading ability students was compared using a paired t-test, the analysis shows no significant difference between the mean scores of high-reading ability students' post-test of the control group and the experimental group. For the low-reading ability students, the result shows a significant difference between the mean of low-reading ability students' post-test of both groups at .001 of significant level. These results can be interpreted to show that the outlining technique provided significant help to low-reading ability students in the experimental group Their English reading ability improved more than those in the control group. With reference to high-reading ability students, there was no difference in the reading ability of the students in the

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experimental and the control groups. The outlining technique did not help the experimental students to be superior in reading comprehension development to those in the control group.

4.5. Results from the questionnaires

After 30 students in the experimental group were taught using the outlining technique for one semester, a questionnaire was given in the classroom in order to collect their opinions of the outlining technique they received. The questionnaire consisted of four parts: students' personal information; students' attitudes towards the usefulness of the outlining technique; students' suggestions for the outlining technique; and students' assessment of their level of reading comprehension

The data obtained from the first part were calculated by percentage and are presented in Table 4.5.

The data in Table 4.5 showed that 100% of the subjects in the experimental group were female Most of them started learning English at Pratom 5 (73.33%). Their average grade in an English course in Mattayom 6 was Grade 1 (36.67 %) and Grade 2 (43.33 %). Most of them reported that they preferred reading skills (70%) to speaking, listening and writing skills (15%, 10% and 5% respectively). However, 96% said that their reading ability was weak.

As for the outlining technique learning experience, most of them (80%) noted that they had never learned to predict stories before reading. Only 20% had learned about prediction. 90% responded that they had never learned to read the passage using the outlining technique. Only 10% had learned this technique. After the training,

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100% of the subjects who received the outlining technique said that this technique was extremely helpful to their reading comprehension.

Information	Percentage
1. Sex	
Male	0
Female	100
2 What is your average grade in English course in Mattayom 6?	
Grade 1	36 67
Grade 2	43 33
Grade 3	10
Grade 4	10
3 At what level did you start learning English?	
Kindergarten	26.67
Pratom 1	0
Pratom 5	73.33
Mattayom 1	0
4. What do you think of your own English reading ability?	
Weak	60 67
Average	38 33
Good	1
Excellent	0
5 What skill do you like to learn most?	
Reading	70
Speaking	15
Listening	10
Writing	5
6 In your opinion, to what extent is reading skill important?	
Little	0
Fairly	0
Much	60
Most	40
7. Have you ever learned to predict stories before reading?	
Yes	10
No	90
8 Have you ever learned to read English texts using the outlining technique?	
Yes	10
No	90
9. In your opinion, does the outlining technique help you understand the content in the reading passages?	
Yes	100
No	0

Table 4.5: The questionnaire results --- Personal information

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The second part of the questionnaire is the usefulness of the outlining technique while the third part is the suggestions for the outlining technique. The criteria used for both parts are as follows:

Scale	Meaning
5	Very strongly agree
4	Strongly agree
3	Moderately agree
2	Slightly agree
1	Disagree

The data in part two and part three were calculated to find the percentage, mean scores and standard deviation. The results of the students' attitudes towards the usefulness of the outlining technique are presented in Table 4.6. The results of the students' suggestions toward the outlining technique are shown in Table 4.7.

Usefulness of the outlining technique	Percentage					X	SD.
	5	4	3	2	1		
1. Thinking ability development							
1.1 The students think systematically	33 33	56.67	10	0	0	4.3	.35
1 2 The students develop their thinking logically	36 67	43.33	20	0	0	4.1	57
1 3 The students establish the ideas in relation to the passage and understand the passage more	53.33	46.67	0	0	0	4 5	.25
2. Reading ability development							
2.1. The students enhance reading skills	26 67	63 33	10	3 33	0	3 8	67
2.2 The students improve reading speed	23 33	60	16.67	0	0	3 8	48
2.3. The students become confident while reading	26 67	43.33	26 67	3.33	0	4.4	68
2.4 The students have positive attitudes towards reading	20	50	30	0	0	3 9	.50

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Usefulness of the outlining technique	Percentage					X	SD.
	5	4	3	2	1		
3. Reading comprehension development							
3 1 The students understand the relationships between the important issues found in the passage	46 67	53.33	0	0	0	4 4	25
3.2. The students can identify the main ideas and supporting details	43.34	43 33	13.33	0	0	4.2	52
3 3 The students improve and comprehend the content more accurately	36 67	50	13 33	0	0	4.1	53
3 4 The students can write a summary by using the outline	33.34	43.33	23 33	0	0	3.8	85
3 5 The students memorize details of the reading passages more precisely	50	33.33	16.67	0	0	4.0	.92
3.6. The students understand the passage with no need to read the whole passage again	36.66	46.67	16.67	0	0	3.8	.96
4. Classroom participation development							
4 1 The students have more chance to participate	46.67	46 67	6 67	0	0	4 3	.44
4 2 The students become more acquainted with one another	46 67	50	3.33	0	0	4 3	.56
4.3 The students become enthusiastic in reading	20	56.67	16.67	6 67	0	3.7	73
4 4 The students establish good relationships with each other and with the teacher	33 34	50	13 33	3.33	0	4.1	.71
4 5 The students develop group work	66.67	33 33	0	0	0	4 5	25
4 6. The students dare to express their opinions and accept others' opinions	43 33	56 67	0	0	0	4.3	50

Table 4. 6: The questionnaire results -- Students' attitudes towards the usefulness of outlining technique

According to the data in Table 4.6, examination of responses to the questionnaire revealed the following results: in terms of thinking ability development, the students agreed that this technique assisted them to think systematically (strongly agree 33.33% and agree 56.67%) and to think logically (strongly agree 36.67% and agree 43.33%). In addition, they felt that they were able to establish their opinion in

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relation to the passage and comprehend the passage more (strongly agree 53.33% and agree 46.67%).

Concerning reading ability development, the students enhanced their reading skills (strongly agree 26.67% and agree 63.33%) and improved reading speed (strongly 23.33 and agree 60%). The students became confident while reading (strongly agree 26.67 and agree 43.33%) and had positive attitudes towards reading (strongly agree 20% and agree 50%).

With regard to reading comprehension development, 100 % reported that they understood the relationships between the important issues found in the passage. 86.67% of students reported that using the outlining technique enabled them to identify the main ideas and supporting details. 86.66% stated that they improved and understood the content more accurately, while 76.66% expressed the opinion that they could write summaries using the outlines. 83.33% memorized details of the reading passage more precisely and understood the passage with no need to read the whole passage again.

As for the classroom participation development, it was reported that 93.34% of the subjects had more chance to participate and 96.67% became more acquainted with one another. 76.67% agreed that they became enthusiastic in reading. 83.34% established good relationships with each other and with the teacher. 100% stated that they liked to work in groups. 100% reported agreement that this technique encouraged them to express their opinions and to accept others' opinions.

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Suggestions for the outlining technique	Percentage					X	SD.
	5	4	3	2	1		
1 The activities in the class should be practiced							
1 1 in large groups	0	10	13.37	26 67	49 96	2.3	.26
1 2 in small group of 4-5 students	63.33	26.67	10	0	0	4 5	46
1 3 in pairs	13 33	26 67	16.67	43.33	0	3 1	62
1 4 individually	6 67	3.33	13 33	36 67	40	2 2	.85
2 The group activities in the class should mix-							
2 1. good students with good students	0	0	10	23.33	66 67	1 5	.87
2 2. moderate students with moderate students	0	13.33	26 67	23 33	36.67	2 1	.41
2.3 weak students with weak students	0	0	6.67	13 33	80	1 2	.61
2.4. good, moderate and weak students	76.67	23.33	0	0	0	4 6	65
3. The languages used in the class should be							
3 1 English	0	0	16 67	33 33	50	1.6	82
3.2 Thai	6.67	6 67	26.67	26.67	33.33	2 2	82
3.3. English and Thai	63.33	30	6.67	0	0	4.5	.39
4. The practice in the classroom should							
4.1 be increase in terms of time	33.3	50	6 67	10	0	3.9	.99
4.2 increase the students' knowledge of structure	26.67	56.66	16.67	0	0	3.8	.54
5. The place used for practicing should be							
5 1 in class	53.33	30	16.67	0	0	4 3	.64
5.2. out of class	23.34	40	23.33	13.33	0	3 2	77
6. This technique should be applied to other subjects	82 33	17.67	0	0	0	4 3	84

Table 4.7: Students' suggestions for the outlining technique

Concerning the data in Table 4.7, 90% of students who made suggestions for the outlining technique recommended that practice in small groups of 4-5 students was best, while 76.63% disagreed with the practice of teachings in large groups. 40 % of the subjects expressed a positive opinion about practicing in pairs while 76.67% were

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against individual activities. 100 % recommended that good, moderate and weak students should be placed in the same group 13.33% said that moderate students should be mixed with moderate students. None agreed with mixing good students with good students and weak students with weak students. 93.33% agreed that in the classroom both Thai and English should be used. 83 33% needed more time for practice, needed more structure knowledge and preferred to practice this technique in class to out of class. However, 100% of the subjects stated that this technique can be applied to other subjects.

In the final part of the questionnaire, students were required to assess their levels of reading comprehension after learning the outlining technique. The criteria used in this part are.

Scale	Meaning
5	Totally understand
4	Mostly understand
3	Moderately understand
2	Slightly understand
1	Do not understand

The data in part four were calculated to find out the percentage, mean scores and standard deviation. The results of the students' assessment of their level of understanding are presented in Table 4.8.

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Texts	Topics	Percentage					X	SD.
		5	4	3	2	1		
1	Environmental Health in Thailand	13 33	50	36 6	0	0	3 8	37
2	Rat Race 1993	23.3	40	36 6	0	0	3.8	62
3	How Much Exercise Do You Need?	16 6	60	20	3.3	0	3.8	51
4	Fitness Genes The Next Break Through	3 3	56 6	40	0	0	3 5	32
5	Walk To Your Heart's Content	16 6	46.6	36 6	0	0	3 5	50
6	Fast Foods	50	43.3	6 6	0	0	4 3	56
7	Fighting The Fat	40	53.3	6 6	0	0	4 3	.35
8	How Parents' Child-Rearing Styles Affect Their Children	50	43 3	6 6	0	0	4.3	.43
9	The Effect of Vitamin A Deficiency on Blindness	30	56 6	13.3	0	0	4.1	41
10	Limit for "Nerve Damage" Vitamin	23 3	43.3	33.3	0	0	4.0	.55
11	The Effect of Tea on Health	36 6	50	13.3	0	0	4 3	.34

Table 4.8: Students' assessment of the level of reading comprehension.

According to the data in Table 4.8, it was found that, in the first column of the students' rating scale, the students ranked Topics 6,7, and 8 highly at the level 5 (totally understanding). The lowest percentage of the "totally understanding" was for Topic 4. Around 23% of the subjects noted that they understood Topics 1, 2, 3, 5, 9, 10 and 11 at the "totally" level. In Column two, more than 40% of the students reported that their understanding of Topics 1-11 was at the "mostly" level. However, they ranked Topic 3 highly at Scale 4 (mostly understand). The findings presented in Column three revealed that their understanding at the moderate level on Topics 6, 7 and 8 was lower than the others. The same percentage of the students (13.3%) showed that their understanding of Topics 9 and 11 were at the moderate level. The highest

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percentage of moderate level was for Topic 4 In Column four, 3.3% of the subjects showed that their understanding of Topic 3 was at the "slightly" level. None responded that they did not understand all passages they read using the outlining technique.

The overall results of questionnaires from the students in the experimental group (excluding Section 1: personal information) show that they had positive feelings towards the outlining technique. They developed reading comprehension ability.

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CHAPTER V

DISCUSSION

Included in this chapter are a discussion of the outcomes and implications for reading instruction in a second language classroom.

Discussion and interpretation of findings

The main purpose of this study was to determine if the outlining technique and the product-oriented approach had an effect on second language reading comprehension of the first year Mahidol nursing students. One group was taught through the outlining technique. The other was taught through the product-oriented approach. To measure the students' reading comprehension development, the English reading achievement test was used. A questionnaire was also used to determine the students' attitudes towards the reading technique they received. Results of this experiment showed the positive effects of the outlining technique and the product-oriented approach on improving reading comprehension.

Reading procedures in the experimental group were consistent with the interactive approach. This involves the readers' background knowledge and the text with the combination of bottom-up and top-down processes. The students made predictions about the text based on prior experience and background knowledge in the pre-reading stage in order to bridge the gap between the content of the text and

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the reader's background knowledge (Dole, Valencia, Greer, and Wardrop 1991). Previewing, pre-questioning and brainstorming used in the pre-reading activities were aimed at initiating appropriate structures and eliciting students' background knowledge of the passage through its topic and the given picture. The use of a picture is a form of pre-reading activity to support effectiveness of reading activities in reading comprehension (Dean and Kulhavy 1981 cited in Ming 1997: 108). The students considered what they knew about the topic using the picture, and about what the organizational structure was going to be. They organized information and added new knowledge to knowledge they already possessed. They wrote down a skeletal outline (see example of skeletal outline in appendix E).

In the while-reading phrase, the students read to confirm or refute their predictions. They then discussed to underline the main ideas and supporting details of the passage. Underlining assisted students to distinguish important from less important and unimportant information (Harris and Sipay 1990: 613). Wiener (1984: 155) acknowledges that underlining helped students call attention to main points and become more dependent readers (Irwin 1986: 83).

With the post-reading phrase, students wrote a complete outline to clarify the content of the passage. The students learned to separate important from less important information, and then to organize the information. Conley (1992: 272-273) and Harris and Sipay (1990: 613-614) state that using the outlining technique helps the students understand the relationships between major and supporting concepts. In addition, the outlining technique provides a means for writing a summary (Sola 1996: 48): a brief statement about what the readers read that provides the schema for organizing basic

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information (McNeil 1984: 16) and for distinguishing different levels of importance in the text (Anderson 1994: 183).

Unlike the reading activities in the experimental group, the reading processes in the control group involved the transmission of knowledge from the teacher to students (Donato and Cumo 1994 cited in Anton 1999. 303). The product-oriented approach was consistent with the bottom-up process in which the readers constructed meaning from words, phrases, clauses and sentences in a linear manner until they comprehended the text. In the pre-reading stage, vocabulary meaning was given to the students to help them attain a general concept to comprehend what they were going to read. Vocabulary has a crucial role for success in second language reading comprehension (Nation 1992: 2). The reader who knows a word well knows other words and ideas related to it The use of pre-teaching unfamiliar vocabulary is one of the major activities in reading comprehension.

The students silently read the passage from words, sentences, paragraphs and the whole text in groups or individually. The teacher then asked a question. One or more students responded to the question. The teacher evaluated the response and asked another question. Questions asked by the teacher are a basic instructional tool by which students can develop knowledge and skills in thinking (Nunan and Lamp 1996: 81). The teacher used questions to facilitate students' reading comprehension, to engage students in the content of the passage, and to participate in the lesson. Scarcella and Oxford (1992: 7) stated that questions can stimulate high-level thinking and encourage the students to make an attempt to understand the passage.

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As for the classroom instruction for both groups, the students in the experimental group were assigned to work in groups of 4-5 in all three stages. Using

group instruction, as far as the researcher observed, made students help each other in reading and read better. They discussed and got information from each other This is in line with the ideas of Long and Porter (1985) who state that group work promoted the quality of student-to-student communication, created a relaxed atmosphere in the classroom, and increased the quantity of language practice.

Contrary to the reading instruction in the outlining technique, the students in the control group were provided opportunities to learn by themselves. They tried to understand the text by themselves. The interaction between teacher-student and student-student was dominated by the teacher (Freeman 1986 cited in Anton 1999: 308) which resulted in active classroom participation and improvement in reading comprehension.

In terms of teaching materials, the overhead projector was used to teach reading comprehension in the experimental group. Using the overhead projector was extremely useful to build up or activate the readers' background knowledge. The students presented their hypotheses about the possible continuation of the text and to identify the general content of the text.

For the material aids in the control group, the blackboard is another type of aid used in teaching reading. The students paid more attention to what the teacher was writing. The teachers carefully prepared their teaching since they decided which part to allocate to which use, and considered the appropriate size of the letters to the size of the class.

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From the perspectives of reading activities, classroom instruction and material aids utilized in both the experimental and the control groups, it was found that both the

outlining technique and the product-oriented approach are helpful for reading comprehension.

According to Findings One and Two (see Table 5.1 and 5.2 in Chapter 4), the significant differences of test scores suggest that the students taught through the outlining technique were superior to the students in the control group (see Graph 5.1).

Graph 5.1: A comparison of The English reading achievement of the control and the experimental groups

The results of the present research are in agreement with the study of Hare and Barcharadt (1984). Their research examined the effect of the outlining technique on reading comprehension. One group was trained to outline while the other was not provided with the training. The results showed that the students in the former group outperformed those in the latter group on the reading comprehension test. Thus, it can be concluded that both the outlining technique and the product-oriented approach are effective in improving the students' reading comprehension. The outlining technique was found to be more effective than a product-oriented approach.

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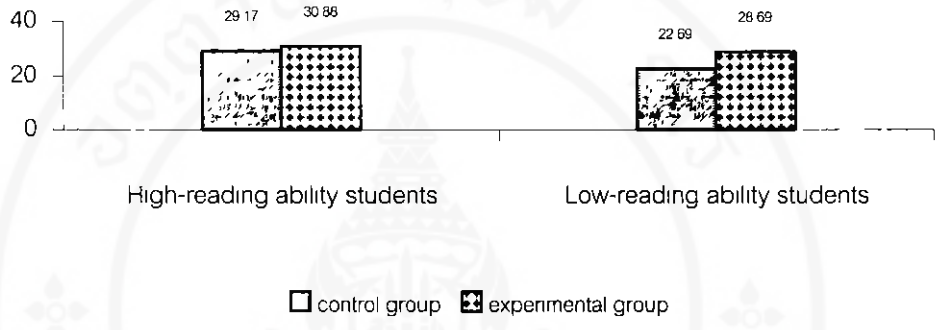
Concerning the comparison of reading comprehension improvement of low- and high-reading ability students in both groups, the results in Table 4.4 showed that

no significant difference was found in the high-reading ability group while a significant difference was found in the low-reading ability group (see Graph 5.2).

Graph 5.2: A comparison of the English reading achievement of the students of the different reading ability in both groups



A possible explanation for this result is that high-reading ability students possessed powerful reading strategies. They used information from their background knowledge and experiences, and actively thought about what they were reading. They were able to find alternatives -- using context, looking back in the text, re-reading, and asking for help -- to solve the problems of comprehension. They also used the organizational pattern to organize their understanding. As a result, high-reading ability students are flexible readers who can develop the confidence to use their strategic reading skills independently.

With respect to the low-reading ability students, they lacked an opportunity to build their own reading strategies to cope with the English text. They could not control necessary strategies and built background knowledge on a particular subject to enhance their understanding of the text They required assistance in identifying the main ideas and supporting details. In the experimental group, the use of

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brainstorming, pre-questioning, previewing the text in the pre-reading stage, underlining while reading, and outlining in the post-reading stage were practiced to foster student involvement in the reading process. Working in groups with mixed-reading ability students also affected the students' reading comprehension performance. They shared their opinions and learned reading strategies from the high-reading ability students. They were consequently able to understand what they were assigned to read and read independently.

In the control group, providing necessary vocabulary meaning, reading the passage silently in individual and answering the questions about written materials were demonstrated to students. They attempted to consider their strengths and weaknesses in comprehension, to match their reading strategies with a reading task, and to monitor their own reading Over time, they learned to apply the method by themselves and gradually responded to questions independently.

After a period of eleven consecutive weeks, the mean scores of the reading comprehension test of high- and low-reading ability students were compared. The findings revealed that low-reading ability students in both groups enriched their reading comprehension. However, both the outlining technique and the product-oriented approach did not significantly facilitate reading improvement of the students at high-ability level as good students are already high-reading ability students. This implies that both the outlining technique and the product-oriented approach are applicable to first year nursing students, especially those of low reading-ability.

With reference to the results of the questionnaire, the attitudes towards the outlining technique were highlighted by the questionnaire. After participating in three months of the English course, the students in the experimental group reported that

their thinking ability, reading ability, reading comprehension, and classroom participation developed. Moreover, the students agreed with practice in small groups of 4-5 mixing good, moderate and weak students together. The majority of the students in the experimental group thought that such an explicit instruction of comprehension strategies led them to reading ability improvement

Implications of the Study

This study was designed to examine if there was any significantly different reading improvement in students' reading ability after two different types of teaching instructions were used in reading classes. The control group was instructed using the product-oriented approach while the experimental group using the outlining technique. The results of the present study demonstrate that the students in the experimental group showed a greater reading improvement on the multiple-choice reading comprehension test than those in the control group.

Some pedagogical implications based on the results of this study and other related research are as follows:

1. Since the outlining technique is used as a means of teaching reading comprehension, before using this technique to develop students' reading comprehension, students should be engaged in a variety of different kinds of activities such as guessing vocabulary meaning from context, and structure knowledge, to comprehend the text.

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2. Underlining, while reading, is an effective reading technique that can be applied to other subjects. Teachers need to provide specific instructions about what the students should underline and how much they underline

3. As mentioned above (Chapter II), content and formal knowledge have a great impact on reading comprehension. One method of building background knowledge is with the use of pre-reading activities. They help students increase their interest and understand the organization of the text they are going to read. As a result, the role of content and formal knowledge should be taken into account when teaching reading to Thai students.

4. In order to improve the reading skills of students, material aids are very useful in classroom instruction. They help students maintain a high level of interest and participate in a learning process. Teachers should provide appropriate material aids to the level of a particular group of students.

5. Types of instruction used are crucial in teaching reading comprehension as they provide greater advantages to students. Group instruction and self-instruction are the most important instructions to create a lively climate in the classroom and increase student motivation. Therefore, teachers should use such instruction in teaching reading so as to develop students reading achievement.

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CHAPTER VI

CONCLUSIONS

Chapter six presents conclusions of the study and recommendations for further research.

Reading is the most significant skill among non-native English speaking students. English teachers strive to help students improve their reading skills due to frequency of use and impact on business, politics, and science. Professors in the nursing field expect their students to read in the English language so that they can keep pace with the advancements in new technology and function effectively in the workplace after graduation. First year nursing students reported that they spend large amounts of time reading word by word, or sentence by sentence. They have insufficient vocabulary or structure to comprehend the texts.

The outlining technique is an interactive model of comprehension which is "less a matter of extracting from print than of bringing meaning to print" (Smith 1983 cited in Ruiz-Funes 1999: 515). The students apply various reading strategies in order to read and comprehend difficult texts: using prior knowledge to make predictions; and structural knowledge to see how the writer develops the text. This enables students to improve their use of effective strategies and to alter or discard an ineffective technique.

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The product-oriented approach is a reading technique that focuses on comprehension questions and answers. Prior to reading, the students look at a set of questions. They scan for specific information in order to find the answers to certain questions from a text. The teachers concentrate on the right answer. As a result, the students learn to answer but not to understand the text properly.

This present study was intended to examine if the outlining technique had an effect on reading comprehension of the first year Mahidol nursing students. 30 Siriraj nursing students and 30 Ramathibodi nursing students were subjects of the study. Prior to instruction, reading comprehension ability of the Siriraj and Ramathibodi nursing students was assessed in order to control any initial differences in the reading performance. According to pre-test scores, their reading comprehension ability was categorized into two different levels: high-reading ability students and low-reading ability students. Both Siriraj and Ramathibodi nursing students were of equal English reading ability students: 17 high-reading ability students and 13 low-reading ability students. The Siriraj nursing students were randomly assigned to be the experimental group which was instructed using the outlining technique. The Ramathibodi nursing students were placed in a control group taught using the product-oriented approach. The researcher taught both groups. After the instruction, the students' reading comprehension progress was measured by analysis of the post-test mean scores of the multiple-choice English reading comprehension test. A questionnaire was used for investigating attitudes of the students in the experimental group towards the reading technique they were instructed in.

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The results showed that both Siriraj and Ramathibodi nursing students improved their reading comprehension significantly after one semester, especially

low-reading ability students in both groups. Low-reading ability students who were taught with the outlining technique showed more reading comprehension improvement than those instructed using the product-oriented approach. However, neither of the techniques improved the high-reading ability students' reading comprehension. Most students in the experimental group reported that the outlining technique was beneficial in improving their reading ability. This is a good indication that the students responded positively to the outlining technique.

It can be concluded that the outlining technique has a significant impact on comprehension. Reading approach, group-instruction, and teaching aids used in the outlining technique are crucial for accurate comprehension and for the construction of meaning. The students develop positive reading habits that encourage them to read on their own and to continue reading after leaving school or university.

Suggestions for Further Studies

Further research studies are needed to replicate these findings. A number of avenues for future reading research are suggested as follows:

1. A replication of this study should be conducted for listening comprehension to find out whether or not similar results can be obtained.
2. Further study should be explored with other different text types.
3. This study should be replicated with other university, college, and tertiary level students who study in different academic fields.
4. A replication of the study that employs a longer treatment period is needed in order to determine if such exposure to the outlining technique could demonstrate additionally significant differences.

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5. Other specific variables which may affect the development of the English reading achievement, including sex, interests, and motivation should be investigated to see to what extent they influence these findings.
6. Other techniques should be compared with the outlining technique so as to consider which technique provides more benefits of comprehension to Thai students.

This study can be used as a guideline for teachers who want to help students develop reading skills and for students who want to increase their reading comprehension ability to a satisfactory in academic reading tasks.

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APPENDIX A

An English reading achievement test

Part I: Reading comprehension part

Read the passages given and choose the best answer. Mark X a, b, c or d on your answer sheet.

Passage 1

Can Wearing a Bra Cause Breast Cancer?

(1) Scientist Sydney Ross Singer and Soma Grismaijer believe that there may be a direct link between wearing a bra and breast cancer. The two scientists have conducted a survey of 4,500 American which, **they** claim, establishes a direct link between breast cancer and bra-wearing.

(2) " Bras are not the cause of breast cancer, but they may be a trigger for it", say Singer and Grismaijer. They have identified a number of factors which can lead to cancer, including age, diet, hormones and hereditary and environmental factors.

(3) They also found, to their astonishment, that wearing a bra for more than 12 hours a day can increase a woman' s chances of developing breast cancer by 11 percent

(4) How can the simple act of fastening on a bra every day be a danger?

(5) The answer, according to Singer and Grismaijer, is that the garment can constrict important lymphatic points in a woman' s body. The lymph system is one of

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the body' s most important methods of eliminating toxins. The pair explain: "Going braless is associated with a 21-fold reduction in breast cancer incidence compared with the general population. Wearing a bra for less than 12 hours daily is associated with a 10 percent greater chance of breast cancer than not wearing **one**"

(6) Over the years, wearing a bra for more than 12 hours a day – or wearing one at night as well, as some women do – could cause a build-up of toxins in the lymphatic system which the body can not expel. Eventually, so the theory goes, these toxins cause the body' s cells to produce cancerous mutations.

(7) For most women, a proven link between bra-wearing and breast cancer would be absolutely devastating The vast majority of us wear bras every day of our lives, from adolescence onwards, because our culture dictates that breasts should look a certain way. We accept this because we grow up with **it**.

(8) If you are a working woman, you may feel it would be inappropriate to steop wearing a bra in the office. You might worry that it gives the wrong message to colleagues, or simply feel that you will be conspicuous and uncomfortable in the workplace. The survey showed that most American women often find they wear bras for more than 12 hours a day.

(9) So to minimize risk, Singer and Grismaijer suggest a few tips:

1 Do not wear your bra for more than 12 hours a day. Put it on as late as possible in the morning and take it off as soon as you get home.

2. Do not sleep in your bra.

3. Try to avoid bras with underwiring or other stiff, shaping components.

4. Avoid push-up bras and sport bras, which compress the breasts.

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5. Strapless bras should only be worn occasionally. The full weight of the breast is supported by the side panels and cups, making these bras more than usually tight around the armpits.
6. Finally keep yourself fit in other ways by exercising regularly and taking care to stick to a healthy diet, one that is rich in fruits and vegetables.

Passage 2

(1) We all want to retain our youthful complexion, but for most of us, much aging damage was done years ago in our childhood. So what can we do to retard the ravenges of time?

(2) You can make you fight against wrinkles as effective as possible by arming yourself with knowledge and a determination to use it properly.

(3) There are two types of aging: intrinsic aging, which is the natural deterioration of tissue over time: and extrinsic aging, when tissues are affected by external factors, of which these are several culprits.

(4) The sun' s ultra violet (UV) radiation is your worst enemy and is estimated as the cause of about 90% of premature aging. Basically, UVA rays penetrate skin and affect its connective tissues so that it loses elasticity and develop wrinkles. UV damage can also lead to sallow toned skin in later life, plus dark age spots and red thread veins.

(5) Smoking not only damages your lungs but wrecks havoc on your face as well, because oxygen is not delivered efficiently to skin tissues which leads to noticeable tissue damage. Smokers are twice as likely to get deep wrinkles than non-smokers.

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Lines around the lips are common among smokers, caused by sucking on cigarettes plus the drying effects of the smoke itself.

(6) Facial expressions establish the pattern of your wrinkles as your age. Habitual forehead wrinkling and brow knitting etches those deep furrows in the forehead, and squinting in the sun is the cause of those dreaded crow' s feet.

(7) The environment is harmful too, especially for those of us who live in Bangkok. Pollution disrupts the skin' s surface, causing moisture loss: also air-conditioned rooms can cause moisture loss and dry out the skin.

(8) When it comes to fighting the battle against aging, your two best weapons are quitting smoking and protecting yourself from the sun. The good news is that science has come to the rescue with skincare technology that did not exist 10 years ago, while new treatments are constantly being developed. Some of the best treatments right now are.

(9) AHAs (Alpha hydroxy acids or fruit acids) which occur naturally in milk, sugar cane and fruit. They exfoliate surface skin cells by loosening the bonds that hold them together and revealing the smooth, new skin underneath, leaving skin more radiant and reducing the depth of wrinkles.

(10) Vitamin A (Retinol) has been prescribed for its anti-aging effect for decades since it was discovered that acne patients treated with **it** also had fewer wrinkles. Although similar to AHA, vitamin A does not work as an acid and does not cause visible surface peeling. Instead, its works deep down inside the skin, and the results only become visible after a few months.

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Passage 3

(1) Heart disease, strokes and other "diseases of affluence" are killing more people in the developing world than in richer countries, according to a report published today.

(2) The report, summarized in an article for the **Lancet** medical journal, said such diseases also kill more people in poorer countries than infections like malaria.

(3) Dr. Christopher Murray, of the Harvard Center for population and Development Studies, and Alan Lopez, of the World Health Organization, were commissioned by the World Bank to investigate causes of death worldwide.

(4) Their startling findings are that heart disease-mostly heart attacks-and strokes will kill more people everywhere than anything else.

(5) Measles and traffic accidents will kill more people than war, and more than half of all female suicides in the world happened in China.

(6) "The leading causes of death in 1990 were ischaemic heart disease (6.3 million deaths), cerebrovascular accidents (4 4 million deaths, lower respiratory infections (4.3 million), diarrhea disease (2.9 million) and perinatal disorders (2.4 million)" they wrote.

(7) "One death in 10 wars from an injury," they added.

(8) One surprising finding, they said, was that heart disease and stroke were such big causes of death in the developing world. Most people thought "diseases of affluence" caused by high-fat, gig-sugar diets and lacks of exercise would be restricted to "better-off" populations.

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(9) But in cancer deaths this was untrue. About 2.4 million of the six million cancer deaths were in industrialized countries and Eastern Europe.

(10) "By 1990, therefore, therefore, there were already 50 percent more cancer deaths in less-developed countries than in developed countries," the authors wrote.

(11) Among women aged 15 to 44, complications from pregnancy and childbirth were the biggest cause of death, while tuberculosis killed 10 percent.

(12) "In China, suicide is estimated to be the cause of almost one in four deaths for this age group". Women in India had an inordinate risk of death from burns, they added.

(13) In an editorial, the **Lancet** said many of the top 10 causes of the 50.5 million deaths in 1990 could have been prevented.

(14) "Four of this 10-ischaemis heart disease, cerebrovascular disease, chronic obstructive pulmonary disease and lung cancer – may be partly prevented by political determination to discourage tobacco smoking, by correcting industrial pollution and unbalanced diets and by discouraging sloth', it said.

(15) The "real surprises" were that suicides outnumbered Aids deaths and that drowning killed more people than war.

(16) " It is worth pondering how much more money is spent on research onto HIV infection than into the causes of suicide or preventing of road-traffic accidents, and why this should be

(17) Mr. Lopez and Mr. Murray made it clear that the research did not reflect the opinions of WHO- a disclaimer the **Lancet** said WHO insisted upon.

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Passage IV

All barbiturates are derivatives of barbituric acid, or malonylurea. All are depressants of the central nervous system. Barbiturates are frequently called sedatives (as opposed to narcotics) because a moderate dose relaxes the user without inducing sleep. But some stronger barbiturates are called hypnotics. These hypnotics will induce euphoria (intense feeling of happiness and pleasant excitement), drowsiness, and sleep. In total some 2,500 barbiturate compounds have been synthesized, and about 50 are available on the market. Many of them simply duplicate one another' s effects. It has been estimated that for medical purposes, six different barbiturates would be enough

Barbiturates are classified according to the duration of the effect upon the body. They are long-lasting, intermediate- or short acting, and ultra short-acting. Phenobarbital, sometimes sold under the trade name Luminal, is a long-lasting barbiturate. Nembutal (pentobarbital) and Secondal (secobarbital) are intermediate- to short-acting; and Pentothal (thiopental) is an ultra-short-acting barbiturate. All are usually given orally to induce relaxation and bring about sleep for various periods of time. Use of long-lasting barbiturates may sometimes result in drug hangover or grogginess (unsteadiness) upon arising. Heavy barbiturate users frequently resemble those intoxicated with alcohol; like a drunk person, **they** are unable to coordinate muscle action.

Heavy, prolonged use of barbiturates will lead to addiction. The body develops tolerance for the drug so that the dosage may have to be increased to produce the desired effect. The lethal (causing death) dose is difficult to determine, for many

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bodily factors come to bear. More than ten times the normal dose will usually produce severe poisoning-but one person has survived after taking doses totaling 25,000mg in 24 hours.

Withdrawal from barbiturate addiction is very nearly as dangerous as the taking of the drug itself. The symptoms include anxiety, tremors or slight shaking or trembling, rapid pulse and increased temperature, and convulsions. In a later stage, which may last up to 14 days, withdrawal may produce hallucinations, paranoid, delusions, and the symptoms of schizophrenia.

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Part II: Vocabulary part

Choose the best answer that best fits the meaning of the underlined word in each sentence.

1 Silicon is a nonmetallic element that is inexpensive because it is so **abundant**. It is so easily found in minerals and rocks that scientists think that the earth may have enough to fast up for many many thousands of years.

a. various b. useful

c. scattered d. plentiful

2. Monkeys have many human **traits**, such as the way they use their hands to peel bananas or scratch themselves. They even share similar facial expression with us, which is one of the reasons that we have been fascinated with them for centuries

a. characteristics b activities

c. organs d. emotions

3. A primary requirement for a productive vegetable garden is **fertile** soil.

a. fine b. irrigated

c. sandy d. rich

4. Tom sometimes wished his parents had been strict with him rather than **indulgent**. He regrets that they allowed him to do almost anything that he wanted, causing him to not learn right from wrong.

a. permissive b. tough

c. freedom d. abandon

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5. Each year, scientists **conduct** experiments on millions of animals.

a. design b. perform

c. freedom d. abandon

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6. In 1985 the worldwide **decline** in the demand for oil kept gasoline prices low.

   a. decrease b. delay

   c. protect d accept

7. Many other anthropologist in the field read Magaret Mead' s first work with **incredulity**.

   a disapproval b dispassion

   c. disbelief d.displeasure

8. Many government provide agricultural subsidies to **boost** farm income.

   a cut down b. increase

   c. eliminate d. support

9. Camels have adaptations that allow them to **endure** a desert environment.

   a comfort b exploit

   c enrich d. survive

10. Many people believe that a diet excluding read meat is more **nutritious**.

    a agreeable b. nourishing

    c necessary d unuseful

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Passage 1

Choose the best answer from the passage.

1. The main idea of paragraph 1 is
   a. to show the number of American women affected by breast cancer.
   b. to show that wearing a bra may cause breast cancer.
   c. to suggest some tips for working women who wear bras.
   d. to support the statement of two scientists how to cause breast cancer.

2. The main idea of paragraph 5 is
   a. to illustrate how wearing a bra may cause breast cancer
   b. to advise working women not to wear a bra.
   c. to suggest the important organism point in a women' s body.
   d. to suggest alternatives to get rid of toxins.

3. **"They"** refers to
   a. American women
   b. Scientists
   c. Breast cancer and bra-wearing
   d Cancerous mutation

4. "**One**" refers to
   a the garment
   b the lymph system
   c. the lymph system
   d. the bra

5. **"It"** refers to
   a. the link between bras-wearing and breast cancer
   b. the cancerous mutation
   c. the vast majority of wearing bra
   d. the cultural attitude

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6. According to the passage, the two scientists aim to
   a. study a link between wearing a bra and breast cancer
   b. reject a link between wearing a bra and breast cancer
   c. develop breast cancer in American working women

d change the attitude of working women towards bra wearing

7 According to the passage, which statement is NOT true?

a. Most American women wear bras almost of their working time in the office
b. Wearing bra is very comfortable for the women in the office
c. The colleagues in the office will give the wrong message to braless women
d. Wearing bra in the office is inappropriate for working women

8. According to the passage, which statement is **CORRECT**?

a. The simple act of fastening a bra everyday causes breast cancer
b. The simple act of expelling the toxins in the lymphatic system causes breast cancer
c. The tightness of the bra may prevent the lymph system from working to its full potential
d. Wearing a bra will allow your body to eliminate dangerous toxins

9. According to the passage, the cause of breast cancer is

a. The good function lymph system will lead to build-up toxins
b. The cancerous mutation will lead to a build-up of toxins
c. The push-up bras and straped bra will lead to breast cancer
d The wearing a bra during sleep will lead to breast cancer

10. According to the passage,

a. Most working women do not mind going bra-less everyday
b. Most women feel uneasy going braless for cultural reasons
c. Most working women try to avoid wearing a bra for more than 12 hours a day
d. Most working women are aware of the relation between wearing a bra and breast cancer

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Passage 2

1. How can you fight against wrinkles?
   a. by studying the knowledge of skin complexion
   b. by retarding the ravenges of time
   c. by retaining a youthful complexion
   d. by protecting the skin during childhood

2. Intrinsic aging is the type of
   a. pollution which causes premature aging
   b. skin which losses elasticity and wrinkles by unnatural way
   c. the deteriorate which is caused from ourself
   d. skin complexion happened during childhood

3. Extrinsic aging refers to
   a. several culprits in the environment
   b. aging which is caused by outside influences
   c. wrinkleness which is caused from ourself
   d. skin complexion happened during childhood

4. One can delay aging by
   a. making the skin smoother and reducing the depth of wrinkle
   b. consulting one' s dermatologist about proper treatment
   c. studying various surface skin cells
   d. stopping smoking and preventing the skin from the sun

5. What is AHAs?
   a. milk, sugar and cane
   b. chemical acids
   c. fruit acids
   d. new technology

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6. "**It**" refers to
   a. AHA
   b. Anti-aging effect
   e. Vitamin A
   d. An acid

7. Smoking can cause tissue damage because
   a. it damages the lungs
   b. it damages the lines around the lips
   c the skin gets deep wrinkle easily
   d skin tissues do not get enough oxygen

8. According to the passage, AHA
   a. does not cause immediate results
   b. leads to visible surface peeling
   c. works deep down inside the skin
   d. are used to treat acne patients

9. What can cause moisture loss from the skin?
   a. UV and smoking
   b. Brow knitting and forehead wrinkling
   c. Pollution and air-conditioned rooms
   d. Facial expression and new technology

10. What is the main idea of the passage?
   a. types of aging and their definition
   b. skin treatments and its effects
   c. external factors that cause tissue damages
   d factors that cause premature aging and how to prevent it

Passage 3

1. What is the main idea of this passage?
   a. The World Bank will investigate the cause of disease in the worldwide
   b Heart disease and strokes will kill many people throughout the world, especially in the third world
   c. The number of suicides are much greater than the number of deaths from AIDS
   d. The leading cause of death in 1990 are in industrialized countries

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2. What kill more people?
   a. pregnancy
   b. suicide
   c. injury
   d. disease of affluence

3 How many people died in 1990 from the leading cause of death?
   a 2.4 million
   b. 6.3 million
   e 4.4 million
   d. 4.3 million

4. What percentage of people who died in 1990 from injuries?
   a. 10%
   b. 25%
   c 40%
   d. 50%

5. What is believed to cause heart diseases and strokes that was not expected to be found in the third world?
   a. Cancer
   b. complications from pregnancy and childbirth
   c. Tuberculosis
   d. high-fat and high-sugar diets

6. Four of the top 10 most deadly diseases affect which part of the body?
   a. heart and lung
   b. stomach
   c. brain
   d. blood

7. According to the passage, which statement is true?
   a. High calories do not affect the cause of diseases of affluence
   b. Exercises will not help to protect the cause of diseases of affluence
   c The death of people in developed countries is cancer
   d. Suicide kill most women from age 15-44 in China

8. Why do the authors believe that we should spend less money on AIDS research?
   a Because many women in India died from burns
   b. Because tiberculosis kills 10% of women from age 14-55
   c. Because more people died from suicide or road accidents
   d. Because more people died from drowning than from war

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9 What is a common infection found in the third world?

a. Malaria
b. heart attack
c. Injury
d. lung cancer

10. What would be the most suitable title for this passage?

a. Diseases of Affluence Hit the Third World
b. Report Shows Suicide Outnumber AIDS Deaths
c "Better OFF' Population Most Affected by Cancer and Strokes
d. The Cause and Finding of Death in the worldwide

Passage 4

1. What is the main idea of the passage?

a. to classify the effect of barbiturates on the body
b. to suggest the use of barbiturates
c. to illustrate the symptoms of the barbiturates
d. to show the amount of barbiturates be available on the market

2. Why are barbiturates frequently called sedatives?

a. Because when taken they can make the user feel relaxed and drowsy
b Because when taken they can make the user feel relaxed without feeling sleepy
c. Because an excessive amount of them can cause the user feel relaxed
d. Because an excessive amount of them can cause the user to sleep

3. The taking of stronger barbiturates can cause

a. euphoria, drowsiness and sleep
b. addiction
c. relaxation and drunkenness
d. drunkenness

4. Why does a barbiturate user have to increase the dosage of the drug for a desired effect?

a. Because the increased amount will induce sleep
b. Because the increased amount will have a long-term effect upon the body
c. Because his body develops tolerance to the drug

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d. Because the user will be able to coordinate the muscle action

5. What is the result of taking excessive amounts and long-term use of barbiturates?
   a. Addiction
   b. Feeling intoxicated
   c. Feeling relaxed
   d. Drunkenness

6. How are barbiturates usually taken?
   a. by injection
   b. by spraying
   c. by oral
   d. by smoking

7. How great is the dosage of barbiturates that will usually cause serious effect to the user?
   a. It is not stated in the passage
   b. Five to ten times the normal dose
   c. Less than ten times the normal dose
   d. More than ten times the normal dose

8. Why is it hard for barbiturate addict ti stop using the drug?
   a. Because it is not necessary to stop using it
   b. Because it is as dangerous as the taking of the drug itself
   c. Because many bodily factors come to bear
   d. Because it brings about sleep for various period of times

9. The word "**they**" refers to
   a. all barbiturates
   b. heavy barbiturates users
   c. bodily factors
   d. the serious effect

10. The followings are the symptoms of withdrawal from barbiturate addiction:
   a. rapid pulse, sleepiness, relaxation and convulsion
   b. rapid pulse, anxiety and increased temperature
   c. relaxation, sleepiness and hallucinations
   d. relaxation, euphoria, insomnia and hallucinations

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APPENDIX B

A Thai questionnaire

วัตถุประสงค์

แบบสอบถามนี้เป็นส่วนหนึ่งในการวิจัยเรื่อง " ประสิทธิภาพการสอนอ่านภาษาอังกฤษด้วยวิธีการสรุปความ" ข้อมูลที่ได้จากแบบสอบถามจะเป็นข้อเสนอแนะที่เป็นประโยชน์แก่นักเรียนในการพัฒนาทักษะการอ่านให้มีประสิทธิภาพมากขึ้น

ความคิดเห็น ทัศนคติ ข้อเสนอแนะของนักศึกษามีผลต่อการวิเคราะห์ข้อมูล ดังนั้น การให้ข้อมูลตามความเป็นจริงและตอบคำถามตามความคิดเห็นที่แท้จริงของนักศึกษาจะเป็นประโยชน์อย่างยิ่งต่อการวิจัยครั้งนี้

ข้อเสนอแนะ

แบบสอบถามนี้แบ่งออกเป็น 4 ส่วน คือ

ส่วนที่ 1 ข้อมูลทั่วไปเกี่ยวกับตัวผู้ตอบแบบสอบถาม

ส่วนที่ 2 ประโยชน์ที่ได้รับจากการอ่านด้วยวิธีสรุปความ

ส่วนที่ 3 ข้อเสนอแนะเกี่ยวกับการใช้วิธีการสรุปความในการอ่าน

ส่วนที่ 4 การประเมินความเข้าใจเรื่องที่อ่านด้วยวิธีการสรุปความ

ขอความกรุณาตอบคำถามทุกข้อ

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ส่วนที่ 1 ข้อมูลทั่วไปเกี่ยวกับตัวผู้ตอบแบบสอบถาม

คำชี้แจง กรุณาวงกลมคำตอบที่นักศึกษาต้องการเลือกในแต่ละข้อ

1 เพศ ชาย หญิง

2 นักศึกษาได้เกรดอะไรในวิชาภาษาอังกฤษในชั้นมัธยมศึกษาปีที่ 6

1 2 3 4

3. นักศึกษาเริ่มเรียนภาษาอังกฤษตั้งแต่

อนุบาล ประถม 1 ประถม 5 มัธยม 1

4. นักศึกษาชอบทักษะใดมากที่สุด

ฟัง พูด อ่าน เขียน

5 นักศึกษาคิดว่าการอ่านของท่านอยู่ในระดับ

อ่อน ปานกลาง ดี ดีมาก

6 นักศึกษาคิดว่าการอ่านมีความสำคัญ

น้อย ปานกลาง มาก มากที่สุด

7 นักศึกษาเคยเดาเรื่องก่อนอ่านโดยใช้วิธีการสรุปความหรือไม่

เคย ไม่เคย

8. นักศึกษาเคยเรียนการอ่านภาษาอังกฤษด้วยวิธีการสรุปความหลังการอ่านหรือไม่

เคย ไม่เคย

9 นักศึกษาคิดว่าการอ่านด้วยวิธีการสรุปความก่อนและหลังการอ่าน จะใช้ให้เข้าใจเรื่องที่อ่านหรือไม่

เข้าใจ ไม่เข้าใจ

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ส่วนที่ 2 ประโยชน์ที่ได้รับจากการอ่านภาษาอังกฤษด้วยวิธีการสรุปความ

คำชี้แจง โปรดวงกลมข้อมูลเกี่ยวกับประโยชน์ของการอ่านภาษาอังกฤษด้วย Outlining technique ในแต่ละข้อด้วยการวงกลมคำตอบของแต่ละข้อ หนึ่งข้อต่อหนึ่งคำตอบ โดยใช้กฎเกณฑ์ที่กำหนดให้ดังต่อไปนี้

หมายเลข	ความหมาย
5	เห็นด้วยอย่างมากที่สุด
4	เห็นด้วยอย่างมาก
3	เห็นด้วยปานกลาง
2	เห็นด้วยบ้าง
1	ไม่เห็นด้วย

นักศึกษาคิดว่า วิธีการอ่านด้วยวิธีการสรุปความ เป็นวิธีที่

1. พัฒนาความคิด

1 1. ทำให้คิดอย่างเป็นระบบ

5 4 3 2 1

1 2. ทำให้พัฒนาความคิดได้กว้างไกลและคิดอย่างมีเหตุผล

5 4 3 2 1

1.3 เสริมสร้างความคิดที่สอดคล้องกับเรื่องและเข้าใจเรื่องเพิ่มมากขึ้น

5 4 3 2 1

2. พัฒนาความสามารถในการอ่าน

2 1 ทำให้ทักษะการอ่านดีขึ้น

5 4 3 2 1

2.2. ทำให้อ่านได้เร็วขึ้น

5 4 3 2 1

2.3 ช่วยเสริมสร้างความมั่นใจเกี่ยวกับเรื่องที่อ่าน

5 4 3 2 1

2.4 เสริมสร้างทัศนคติที่ดีต่อการอ่าน

5 4 3 2 1

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3. พัฒนาการอ่านเพื่อความเข้าใจ

3 1 ทำให้เข้าใจถึงความสัมพันธ์ระหว่างเนื้อหาที่สำคัญในเรื่อง

5 4 3 2 1

3 2 ทำให้สามารถแยกแยะใจความสำคัญและสร้างความเข้าใจเกี่ยวกับเนื้อหาของเรื่องได้มากขึ้น

5 4 3 2 1

3 3 ทำให้เข้าใจเนื้อหาที่อ่านได้อย่างถูกต้อง

5 4 3 2 1

3.4. ทำให้สามารถเขียนเรื่องย่อจากเรื่องที่อ่านได้

5 4 3 2 1

3 5 ทำให้สามารถจดจำรายละเอียดเกี่ยวกับเรื่องที่อ่านได้มากขึ้น

5 4 3 2 1

3.6 ทำให้เข้าใจเรื่องโดยไม่ต้องย้อนกลับไปอ่านเนื้อหาทั้งหมด

5 4 3 2 1

4. พัฒนาการมีส่วนร่วมในชั้นเรียน

4.1. ทำให้นักศึกษามีส่วนร่วมในการเรียนการสอนมากขึ้น

5 4 3 2 1

4.2. ทำให้นักศึกษามีความคุ้นเคยกันมากขึ้น

5 4 3 2 1

4.3. ทำให้นักศึกษามีความกระตือรือร้นในการเรียน

5 4 3 2 1

4.4. เสริมสร้างความสัมพันธ์อันดีระหว่างครูและนักเรียน

5 4 3 2 1

4 5. ส่งเสริมทักษะการทำงานเป็นกลุ่ม

5 4 3 2 1

4 6 ทำให้นักเรียนกล้าแสดงความคิดเห็นและยอมรับความคิดเห็นผู้อื่น

5 4 3 2 1

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ส่วนที่ 3 ข้อเสนอแนะเกี่ยวกับการใช้วิธีการสรุปความในการอ่านภาษาอังกฤษ

1.	ลักษณะการเรียนการสอนในห้อง ควรเป็น					
	1 1 กลุ่มใหญ่	5	4	3	2	1
	1.2 กลุ่มเล็ก 4-5 คน	5	4	3	2	1
	1 3. คู่	5	4	3	2	1
	1.4 เดี่ยว	5	4	3	2	1
2	ถ้าจัดกิจกรรมเป็นกลุ่ม ควรจัดกลุ่มแบบ					
	2.1. เด็กเก่งกับเด็กเก่ง	5	4	3	2	1
	2.2. เด็กปานกลางกับเด็กปานกลาง	5	4	3	2	1
	2 3. เด็กอ่อนกับเด็กอ่อน	5	4	3	2	1
	2 4 เด็กเก่ง เด็กอ่อนและเด็กปานกลาง	5	4	3	2	1
3	ภาษาที่ใช้ในการสอน ควรเป็น					
	3.1. ภาษาไทย	5	4	3	2	1
	3 2. ภาษาอังกฤษ	5	4	3	2	1
	3 3 ทั้งภาษาไทยและภาษาอังกฤษ	5	4	3	2	1
4.	สิ่งที่ควรเพิ่มในการฝึก					
	4.1. เพิ่มระยะเวลาในการฝึก	5	4	3	2	1
	4 2 เพิ่มการเรียนการสอนไวยากรณ์	5	4	3	2	1
5	สถานที่ที่ใช้ในการฝึก					
	5 1. ในห้องเรียน	5	4	3	2	1
	5.2. นอกห้องเรียน	5	4	3	2	1
6.	นักศึกษาสามารถนำเทคนิคนี้ไปใช้ในการอ่านหนังสือวิชาต่างๆ	5	4	3	2	1

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ส่วนที่ 4 **การประเมินผลความเข้าใจเรื่องที่อ่านด้วยวิธี Outlining technique**

คำชี้แจง **กรุณาประเมินผลความเข้าใจเนื้อเรื่องที่อ่านด้วยวิธี Outlining technique หนึ่งข้อต่อหนึ่งคำตอบ โดยใช้กฎเกณฑ์ที่กำหนดให้ดังนี้**

เข้าใจมากที่สุด	5
เข้าใจมาก	4
เข้าใจปานกลาง	3
เข้าใจน้อย	2
ไม่เข้าใจ	1

เรื่องที่ 1	Environmental Health in Thailand	5	4	3	2	1
เรื่องที่ 2	Rat Race	5	4	3	2	1
เรื่องที่ 3	How Much Exercise Do You Need?	5	4	3	2	1
เรื่องที่ 4	Fitness Genes: The Next Breakthrough	5	4	3	2	1
เรื่องที่ 5	Walk To Your Heart's Content	5	4	3	2	1
เรื่องที่ 6	Fast Foods	5	4	3	2	1
เรื่องที่ 7	Fighting The Fat	5	4	3	2	1
เรื่องที่ 8	How parents' child-rearing Styles Affect Their Children	5	4	3	2	1
เรื่องที่ 9	The Effect of Vitamin A Deficiency on Blindness	5	4	3	2	1
เรื่องที่ 10	Limit for "Nerve Damage" Vitamin	5	4	3	2	1
เรื่องที่ 11	The Effect of Tea on Health	5	4	3	2	1

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APPENDIX C

AN ENGLISH QUESTIONNAIRE

Objectives

This questionnaire is a part of Master Degree of Applied Linguistics entitled "A study of the effectiveness of the outlining technique on reading comprehension of the first year nursing students at Mahidol University. The data obtained will be useful for the analysis and the results are expected to lead to recommendations for developing reading skills.

Opinions, attitudes and recommendations affect the analysis of the data. Therefore, your responses are important to succeed the study, if you sincerely give the information.

Directions

This questionnaire is categorized into 4 parts·

Part I	Personal information
Part II	Usefulness of the outlining technique
Part III	Suggestions of the outlining technique
Part IV	Assessment of students' understanding

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Thank you very much for your co-operation

Part I: Personal Information

Instruction: Please respond to the following statements by circling the number that the most closely corresponds to your personal opinion or feeling. Select only one answer for each item.

1. Sex Male Female

2. What is your average grade in English course in Mattayom 6?

   Grade 1 Grade 2 Grade 3 Grade 4

3. At what level did you start learning English?

   Kindergarten Pratom 1 Pratom 5 Mattayom 1

4 What do you think of your own English reading ability?

   Weak Average Good Excellent

5. What skill do you like to learn most?

   Reading Speaking Listening Writing

6. In your opinion, to what extent is reading skill important?

   Little Fairly Much Most

7 Have you ever learned to predict stories before reading?

   Yes No

8 Have you ever learned to read English texts using the outlining technique?

   Yes No

9 In your opinion, does the outlining technique help you understand the content in the reading passages?

   Yes No

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Part II: Usefulness of the Outlining technique

Instruction: Read the following sentences and indicate your opinion of the usefulness of the outlining technique by circling one of the numbers. Your options are

Very strongly agree	Strongly agree	Moderately agree	Slightly agree	Disagree
5	4	3	2	1

1. Thinking ability development

1.1. The students think systematically

5 4 3 2 1

1.2. The students develop their thinking logically

5 4 3 2 1

1.3. The students establish the ideas in relation to the passage and understand the passage more

5 4 3 2 1

2. Reading ability development

2.1. The students enhance reading skills

5 4 3 2 1

2.2. The students improve reading speed

5 4 3 2 1

2.3. The students become confident while reading

5 4 3 2 1

2.4. The students have positive attitudes towards reading

5 4 3 2 1

3. Reading comprehension development

3.1. The students understand the relationships between the important issues found in the passage

5 4 3 2 1

3.2. The students can identify the main ideas and supporting details

5 4 3 2 1

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3.3. The students improve and comprehend the content more accurately

5 4 3 2 1

3.4. The students can write a summary by using the outline

5 4 3 2 1

3.5. The students memorize details of the reading passages more precisely

5 4 3 2 1

3.6. The students understand the passages with no need to read the whole text again

5 4 3 2 1

4. Classroom participation development

4.1. The students have more chance to participate

5 4 3 2 1

4.2. The students become more acquainted with one another

5 4 3 2 1

4.3. The students become enthusiastic in reading

5 4 3 2 1

4.4. The students establish good relationships with each other and with the teacher

5 4 3 2 1

4.5. The students develop group work

5 4 3 2 1

4.6. The students dare to express their opinions and accept others' opinions

5 4 3 2 1

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Part III: Suggestions for the Outlining Technique

1. The activities in the class should be practiced					
1.1. in large group	5	4	3	2	1
1.2. in small group of 4-5 students	5	4	3	2	1
1.3. in pairs	5	4	3	2	1
1.4. individually	5	4	3	2	1
2. The group activities in the class should be mixed					
2.1. good students with good students	5	4	3	2	1
2.2. moderate students with moderate students	5	4	3	2	1
2 3. weak with weak students	5	4	3	2	1
2.4 good, moderate and weak students	5	4	3	2	1
3. The languages used in the classroom should be					
3 1. Thai	5	4	3	2	1
3.2 English	5	4	3	2	1
3.3. Thai and English	5	4	3	2	1
4. The practice in the classroom should					
4.1. be increased in terms of time	5	4	3	2	1
4.2. increase the students' knowledge of structure	5	4	3	2	1
5. The place used for practicing should be					
5.1. in class	5	4	3	2	1
5 2. out of class	5	4	3	2	1
6. This technique should be applied to other subjects	5	4	3	2	1

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Part IV: Assessment of the level of reading comprehension

Instruction: Please assess your understanding on the passages you read through the outlining technique by circling one of the numbers. Your options are

Totally understand 5

Mostly understand 4

Moderately understand 3

Slightly understand 2

Do not understand 1

Topic 1	Environmental Health in Thailand	5	4	3	2	1
Topic 2	Rat Race	5	4	3	2	1
Topic 3	How Much Exercise Do You Need?	5	4	3	2	1
Topic 4	Fitness Genes: The Next Breakthrough	5	4	3	2	1
Topic 5	Walk To Your Heart's Content	5	4	3	2	1
Topic 6	Fast Foods	5	4	3	2	1
Topic 7	Fighting The Fat	5	4	3	2	1
Topic 8	How parents' child-rearing Styles Affect Their Children	5	4	3	2	1
Topic 9	The Effect of Vitamin A Deficiency on Blindness	5	4	3	2	1
Topic 10	Limit for "Nerve Damage" Vitamin	5	4	3	2	1
Topic 11	The Effect of Tea on Health	5	4	3	2	1

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APPENDIX D

Supplement materials

How Parents' child-rearing Styles Affect Their Children

What make one child independent and other a clinger? One ready to hit out at the slightest provocation and another loathe to fight? One answer, as we' re seen. Lies in the basic temperament children are born with. Another very important influence on behavioral styles is the early emotional environment, how they' re treated by their parents.

Psychologist Diana Baumrind set out to discover relationships between different styles of child rearing and the social competence of children. She reviewed the research literature and conducted her own studies with ninety-five families of nursery school children. Using a combination of long interviews, standardized testing, and observations at school and home, she identified three categories of parenting styles and linked them to children' s behavior.

Authoritative parents exert firm control when necessary, but they explain why they take their stands and encourage their children to express their opinion. They feel confident in their ability to guide their children, while respecting the children' s interests, opinion, and unique personalities. They combine firm control with encouragement and love. Their children know they are expected to perform well, fulfill commitment, and carry out duties in the family. They know when they are

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meeting expectations and when it is worth risking parental displeasure to pursue some other goal. They seem to thrive on their parents' reasonable expectations and realistic standards, and are the most self-reliant, self-controlled, assertive, exploratory, and content.

Authoritarian parents value unquestioning obedience and punish their children forcefully for not conforming to set and fairly absolute standards. They are fairly detached, controlling, and distant. Their children tend to be discontented, withdrawn, and distrustful.

Permissive parents make few demands on their children, set few rules, and hardly ever punish. As preschoolers, their children are immature, the least self-reliant, self-controlled, or exploratory.

Baumrind' s work raises important issue about child-rearing practices, but before we conclude that parenting is all, we have to remember what children bring to the family. Through their children inborn temperaments, children influence their parents. It is possible that an easy child will elicit an authoritative attitude from their parents, while a difficult one may make tyrants out of his.

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Limit for "Nerve Damage " Vitamin

The UK government is drawing up legislation to control levels of vitamin B6 in dietary supplements following advice from experts that excess amounts can cause nerve damage

Jeff Rooker, the Food Safety Ministry, has expected the recommendation of the independent Food Advisor Committee (FAC) that the daily intake of vitamin B6 should not excess 10 mg. The new limit was recommended to the FAC by the Committee on Toxicity (COT), part of the Department of Health. According to a COT study, taking high doses of vitamin B6 for several months damages peripheral nerves, leading to muscle weakness, tingling, loss of balance and numbness. The symptoms are reversible, but very high doses can cause permanent damage.

There are a large number of vitamin B6 supplements freely available on the market, some providing doses of 250 mg, the FAC says. The new law will limit the doses, and supplements will have to carry labels warning about the possible dangers of exceeding the 10 mg limit.

The vitamin is found in foods such as cereals, potatoes, milk, meat and beer. According to the FAC, 1 4 mg a day is quite enough for a healthy adult. Under the new legislation, people who need extra vitamin B6 because of inherited medical conditions will be able to obtain high-dose pills on prescription. However, women who self-medicate themselves with large amount of vitamin B6 to combat pre-menstrual syndrome could lose out, according to the lobby group, " Consumers for Health Choice"

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David Bender, a nutritional biochemist at University College London, says that the use of vitamin B6 to combat pre-menstrual syndrome is a separate issue and should be tackling by medical authorities. "At higher levels you are talking about a drug". He says. However, 10 mg is a sensible limit for dietary purposes, Bender says.

Adapted from Chemistry & Industry

21 July 1997

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The Effect of Vitamin A Deficiency on Blindness

The leading cause of preventable blindness among children today is vitamin A deficiency (VAD), a form of malnutrition that put about 250 million children around the world at risk of nutritional blindness and disease. Nutrition is therefore an important factor in disability causation and prevention.

Vitamin A is essential for a child' s normal vision, growth, cell differentiation, health and survival It strengthens the body' s immune response and helps the body to resist disease and infection. Children who do not eat enough foods that are rich in vitamin A – such as breast milk, liver, eggs, milk, orange and yellow fruits, and dark green leafy vegetables -- are at risk of this deficiency. VAD can cause night blindness, lower the resistance to infections and, in extreme cases, leads to incurable nutritional blindness Even in its mildest form, it may seriously effect children' s health, development and survival

VAD is a major public health among Asian children and, although Thailand is not listed by Who as a country with a clinical problem, it represents an unseen threat which can emerge at any time. This lesson was brought home when hospital reports from 1988-1991 in Yala province, southern Thailand, revealed that 31 children aged 3 to 15 months had become permanently blind because of VAD; another two cases showed up in the 1992 survey.

Since then, Thailand' s Ministry of Public Health has waged a battle against this form of preventable disability. It was found that these children were not eating enough vitamin A – rich foods, firstly because they were breast-fed for only one month Their mothers went to work on rubber plantations, leaving their children with

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grandparents or others who fed them sweetened condensed milk (which is not suitable for infant feeding) because it looks similar to breast milk and is inexpensive. The children also suffered from diarrhea and pneumonia, which further depletes their vitamin A stores. Consequently, inadequate breast-feeding, use of inappropriate breast-milk substitutes, and infection brought about VAD and blindness.

Adapted from Science News

Vol. 152, November 29, 1997.

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Fighting the Fat

Fat is not just a feminist issue – it is a health hazard, and one which concerns an increasing number of men and women in the UK By their mid-twenties, 31% of men and 27% of women are substantially overweight and therefore incurring a health risk.

Obesity refers to an excess of fatty tissue in the body compared to lean tissue. Most people become obese because they eat more calories than they need, but family history and lifestyle also affect how fat a person will become. Very few adults are obese because of glandular or hormonal disorders.

Obese people are more likely to be diabetic, have high blood pressure, have high levels of fat – particularly cholesterol – in the blood. There is also a link between obesity and coronary heart disease. Other potential health problems include an increased risk of gall bladder disease, bone and joint problems; menstrual problems; breast and uterine cancer in women; prostate cancer in men and a decrease in lung function.

In principle, losing weight is very straightforward – you have to cut down on the calories you eat. Of course, there is some fine-tuning – the reduced intake should still consist of a well-balanced diet, and the weight loss should be steady (no more than one or two pounds in week). To help the process along – and to tone up the body as weight is shed-would-be dieters should also gradually increase their level of physical activity.

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Very low calories diets – in the form of complete meal replacement – should be used be only very overweight individuals, and then with medical advice and not for

more than one month at a time Other meal replacements that consist of calories-counted packaged are useful for calories counting if time is short, but are not as good as permanently changing one' s eating habits. Low-fat and low-calories products can be a useful way of cutting sugar and fat intake.

Commercial slimming organisations are very popular. And while it is difficult to access their success, it is clear that the support and advice they give can be of enormous value to slimmers who find it difficult to do it alone.

Adapted from Nursing Times.

April 5, Vol. 85. No.14. 1989.

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The Effect of Tea on Health

Eastern cultures have considered tea to be a healthy drink for 4,000 years. Science is now stepping into the ring, and studies are beginning to investigate tea' s effects on health by considering data from clinical studies and laboratory research on animals

The three types of tea – black, green and oolong – are all made from the leaves of the same plant, **Camellia sinensis**. The manufacturing process determines the tea produced. However, recently scientific evidence has been showing that both black and green teas may provide health benefits. In contrast, oolong tea really has no other nutritional benefits. It has no fat, no calories, no sugar, no sodium, no significance amounts of vitamins or minerals, and half that caffeine of coffee. Yet there are compounds in tea called flavonoids that are creating a lot of hype about the advantages of being a tea drinker.

These nifty little flavonoid compounds, which are found in tea and other plant foods, are a type of antioxidant. Antioxidants help protect the body from free radicals, which are substances that can cause damage to cells in our bodies. Free radicals occur naturally; they are produced as our bodies work to keep us alive. Free radicals can cause damage to cells and lead to chronic diseases such as cancer and heart disease. The richest sources of antioxidants are fruits and vegetables.

There have been several studies on tea' s antioxidant properties and related health benefits. One study on older Dutch men found that drinking tea and eating other foods rich in flavonoids on a regular basis helped reduce the risk of death from coronary heart disease and heart attack.

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Another study showed that consuming five cups of black tea per day helped prevent atherosclerosis. Tea may protect against some cancers, such as colon cancer, and animal studies show that tea can protect against skin cancer. Tea may also help protect teeth since tea also contains fluoride which strengthens tooth enamel.

Another study found that post-menopausal women who drank two or more cups of tea per day had a much lower risk of developing digestive tract and urinary tract cancers.

Scientific investigation is beginning to suggest that both black and green tea are good for health. Tea' s ability to prevent cancer has been convincingly demonstrated in laboratory animals, but this effect in humans still need to be proved. Future epidemiological and intervention studies will be able to test the idea that drinking tea regularly may help prevent cancer and cardiovascular disease. It therefore seems reasonable to recommend tea as a healthy drink, but it should be consumed in excessive amounts or at high temperatures.

Adapted from Bangkok Post

Friday 19, 1997

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APPENDIX E

An Example of students' skeletal outline

Title: The Effect of Tea on Health

Main idea: To investigate the effect of tea on health by considering data from clinical studies and laboratory research on animals.

Types of tea: Black, Green, and Oolong

Compound: Flavonoid (a type of antioxidant)

Advantages of compounds:

Protect the body from free radicals which damage cells and lead to chronic diseases such as cancer and heart disease

Disadvantages of compounds:

No have

Sources of compounds:

Fruits and vegetables

Dutch' study:

Drinking tea reduces the risk of death from coronary heart disease and heart attack

5-cup consumption:

Prevent atherosclerosis, protect skin cancer and strengthen teeth

Women's view:

Drinking more than 2 cups per days protect digestive tract and urinary tract cancers

Conclusion:

Tea is a healthy drink but it should not be consumed in excessive amounts or at high temperatures

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Title: The Effect of Vitamin A Deficiency on Blindness

Main idea: Results of vitamin A on blindness

Cause: Unknowledge about nutrition, not eat vegetable

Sources: Vegetable, fruits, eggs, milk

Effects: Blindness in dark and dry skin

Solution: See the doctor,
Eat fruits and vegetables properly
Eat special vitamin

Age: Child 5-11 years
Adults over 45 years

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BIOGRAPHY

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