THE ANALYSIS OF THE PROBLEMS CONCERNING
TEXT READING SKILLS OF THE MATHAYOM SUKSA 6 STUDENTS
IN THE DEMONSTRATION SCHOOLS AFFILIATED TO THE
MINISTRY OF UNIVERSITY AFFAIRS IN THAILAND

SAIWAROON WONGSUWAN

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Saiwaroon Wongsuwan
ศืวิทยานิพนธ์ การวิเคราะห์ปึกษาเกี่ยวกับการอ่านของนักเรียนชั้นมัธยม ปีที่ 6 โรงเรียนสาธิตสังกัดวิทยาลัยของรัฐในประเทศไทย ผู้วิจัย สาขาวิชญาณ วงกตสุวรรณ ปริญญา ศิลปศาสตรมหาบัณฑิต (ภาษาศาสตร์) คณะสตริโลกาวิศวบัณฑิต ประกาศ วิทยาลัยเรียงศรี มหาวิทยาลัยราชภัฏนครราชสีมา ปีการศึกษา 2535 วันที่สิ้นสุดการศึกษา 7 สิงหาคม น.ศ. 2535

บทที่ 1

การวิจัยนี้จัดทำขึ้น เพื่อวิเคราะห์ปึกษาในการอ่านภาษาอังกฤษของนักเรียนชั้น มัธยมที่ 6 โรงเรียนสาธิตสังกัดวิทยาลัยของรัฐในประเทศไทย จำนวน 10 โรงเรียน นักเรียนทั้งหมดมีจำนวน 496 คน โดยแบ่งออกเป็นนักเรียน โรงเรียนสาธิตสังกัดวิทยาลัยของรัฐในกรุงเทพฯ 266 คน และสังกัดพื้นที่ 230 คน ในจำนวนนักเรียนทั้งหมดนั้นแบ่งออกเป็น 3 กลุ่ม กลุ่มการวิเคราะห์ภาษา 224 คน กลุ่มการวิเคราะห์ประโยค 122 คน เลือกข้อสอบแบบสัมภาษณ์ (Multiple-choice) เพื่อวัดความสามารถในการอ่านภาษาอังกฤษแบบทดสอบประกอบด้วยเนื้อหาที่บันทึกในข้อสอบประจำวัน โดยแบ่งความสามารถทั้งบริบทภาษาอากาศเป็น 3 ด้าน คือ "sentence structure", "vocabulary in context" และ "paragraph organization"

ในการวิเคราะห์ข้อมูลที่ได้จากการทดสอบผู้วิจัยได้แบ่งกลุ่มนักเรียนออกเป็น 2 กลุ่มคือ กลุ่มการวิเคราะห์ภาษา และกลุ่มการวิเคราะห์ประโยค และใน จำนวนนักเรียนทั้งหมดนี้ได้แบ่งกลุ่มนักเรียนในกรุงเทพฯ และสังกัดพื้นที่ ume นักเรียนจากการแบ่งมาตรฐานและคะแนนเฉลี่ยของนักเรียน

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1. นักเรียนทั้งหมดมีอภิปรายด้วยกันเรื่องแผนการเรียนวิทยาศาสตร์ และแผนการเรียนภาษาทั้งในกรุ้งเทพฯและต่างจังหวัดมีความสามารถในการอ่านตามความสาระทางภาษาทั้ง 3 ด้านอยู่ในระดับปานกลาง

2. นักเรียนแผนการเรียนวิทยาศาสตร์ มีความสามารถในการอ่านตามความสามารถทางภาษา ทั้ง 3 ด้าน อยู่ในระดับปานกลาง นักเรียนแผนการเรียนภาษา มีความสามารถในด้าน "vocabulary in context" และ "paragraph organization" ดังกล่าวด้าน "sentence structure" แตกต่างกันตามความสามารถในการอ่านตามความสามารถทางภาษาทั้ง 3 ด้าน ของนักเรียนแผนการเรียนภาษาอยู่ในระดับปานกลางเช่นเดียวกัน และนักเรียนแผนการเรียนวิทยาศาสตร์และนักเรียนแผนการเรียนภาษาในด้านของ "sentence structure" และ "paragraph organization" แตกต่างกันอย่างมีนัยสำคัญทางสถิติ แต่ในด้านของ "vocabulary in context" คะแนนของนักเรียนทั้งสองแผนการเรียนแตกต่างกันอย่างไม่มีนัยสำคัญทางสถิติ

3. นักเรียนในกรุ้งเทพฯและต่างจังหวัด มีความสามารถในการอ่านตามความสามารถทางภาษาทั้ง 3 ด้าน อยู่ในระดับปานกลาง และนักเรียนทั้งสองด้านของ "sentence structure" นั้นจากคะแนนของนักเรียนในกรุ้งเทพฯและต่างจังหวัดแตกต่างอย่างไม่มีนัยสำคัญทางสถิติ แต่คะแนนของนักเรียนทั้งสองกลุ่มนี้มีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติในด้านของ "vocabulary in context" และ "paragraph organization"

เมื่อนำผลจากการสังเกตุมิติความความสามารถทางภาษาแต่ละด้านนักเรียนทั้ง 2 กลุ่ม คือ แผนการเรียนวิทยาศาสตร์ และแผนการเรียนภาษา และนักเรียนในกรุ้งเทพฯและต่างจังหวัด มีปัญหาในการอ่านที่คล้ายคลึงกัน
Thesis Title: The Analysis of the Problems Concerning Text Reading Skills of the Mathayom Suksa 6 Students in the Demonstration Schools Affiliated to the Ministry of University Affairs in Thailand

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ABSTRACT

This study was an effort to determine the problems in English text reading skills of students at M.6 level in demonstration schools affiliated to the Ministry of University Affairs in Thailand. To this end all ten demonstration schools under the Ministry were used as a selecting ground from which 496 students were selected - 266 from Bangkok and 230 from schools in the provinces or 272 from science program and 224 from arts program - to sit for an examination. The instrument used was a test paper in English comprising passages of authentic texts to diagnose the students' problems in reading, such as understanding sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization. There were three main areas of language proficiency viz sentence structure, vocabulary in context and paragraph organization.
In evaluating the results, the participating students were separated into two groups—science and arts and there was an additional grouping to separate Bangkok students and students in the provinces in each original group.

The findings from the standard scores and mean scores were as follows:

1. Taking science and arts students both in Bangkok and in the provinces as a whole the students' ability was at average level for each of the areas of difficulty.

2. The ability of science students in the three areas of difficulty was at average level. The ability in "vocabulary in context" and "paragraph organization" of arts students was better than that in "sentence structure", albeit the achievement of arts students in these three areas was only at average level. There was no significant difference between mean scores gained by science and arts students in "vocabulary in context" but in "sentence structure" and "paragraph organization" there was significant difference between achievements of the two groups.

3. The achievement of Bangkok students and students in the provinces taken as groups showed ability at average level in all three areas of difficulty. There was no significant difference between mean scores gained by Bangkok students and students in the provinces in "sentence structure" but there was significant difference between achievements of the two groups in the areas of "vocabulary in context" and "paragraph organization".

Each category of text reading skills showed common areas of good achievement as well as common problematical areas and these common areas were apparent in comparison between science and arts students as well as between Bangkok students and students in the provinces.
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CHAPTER I

INTRODUCTION

Background of the study

In Thailand, most of the students who opt for upper secondary education tend to pursue studies at a higher level. A knowledge of English is vital for studying various disciplines. Students who pursue their studies at university level need to read textbooks in English because translation into Thai is not very often available to them. Students who aim for vocational training and education study English for professional purposes, thus they need to read and understand English operation manuals of tools, equipment and machinery. It is apparent that these activities require a very good command of English, especially reading skills. Ajchara Wongsothorn (Ajchara Wongsothorn 1981 : 22) has reported in the outcome of her research on the need for English usage among employees in government sectors and enterprises that they need reading skills most and translation skills least. The government, being aware of the significance of English studies, includes it in the school curriculum and requires students to learn English from elementary to secondary level.
At secondary level, students are expected to read and understand various kinds of English texts such as paragraphs, passages, simplified articles and business letters. The ability to cope with the text is considered a stepping stone for the students in choosing their careers and continuing their studies. For these reasons, the secondary school English curriculum of 1981 emphasizes reading skill development in students as follows:

- To practise reading skills for everyday life, higher education, and career in accordance with the age and potential of the students.

- To improve reading for information and adapt their newly acquired knowledge to their own thinking. (Ministry of Education 1981:22)

The objective of reading that has been stated in the English curriculum of 1990 is to develop understanding in reading and the rate of reading. In reading courses, the students will be given practice in reading news articles, notices from newspapers and magazines. The students may also read text books and other interesting literature according to their age and taste. (Ministry of Education 1990:100-101)
We can see that students are required to develop reading skills at a higher level than other skills. To fulfill the objectives of teaching English stated in the curriculum, English teachers must give emphasis to developing reading skills in students. That is, they have to specify the objectives of English courses, develop materials, plan classroom activities and evaluate students' performance. English teachers mainly aim to equip the students with reading strategies and provide them with opportunities for classroom reading and outside classroom reading so that they can become independent readers. They will use these skills as a tool in acquiring knowledge and accomplishing tasks when they further their studies and when they take up their occupations in accordance with present day social needs. Students should maintain a good reading skill, otherwise they miss their chances to pursue higher education or keep themselves up-to-date with the knowledge, news, and world events.

This study will draw its subjects from demonstration schools in Bangkok and in the provinces. A demonstration school, as its name implies, is set up to be a model for other schools. The school tries out the most effective teaching methods and plays an important role in teacher training. The methods of teaching are demonstrated to in-service teachers as well as inexperienced teachers. Suggestions and recommendations on how to cope with students' learning problems are made available to those teachers who need teaching guidance. The Department of English is one
section in the demonstration school which gives a service in English teaching to other schools. Studying the students’ problems, especially in reading skill in English should be started in the demonstration schools in order to gain data necessary for the preparation of teaching and activities, the selection of teaching methods, materials, and the design of the evaluation tools to suit the needs of the students. This should be treated as a matter of priority. Thus the teaching and the learning process can be an even better model for other schools.

Statement of the problems

The secondary school English curriculum of 1981 and the new curriculum of 1990 put emphasis on reading skills. (Ministry of Education 1981: 41-54, Ministry of Education 1990:100-101). However recent research shows that current methods of teaching English do not truly help students develop their reading skills. The teacher still uses incorrect approaches. (Somthawil Thanasophon 1981:21 and Wisar Jutiwat 1985 :41) The Faculty of Humanities, Srinakharinwirot University Pathumwan Campus has found that the current method of teaching reading as employed by the teachers in most secondary schools is monotonous and lacking in motivation. Teachers get into the drudgery of translating each sentence for their students. Such a method of teaching cannot help in developing the students’ reading competence. (Faculty of Humanities, Srinakharinwirot
University, Pathumwan 1985:339) The Ministry of Education urges teachers to employ various techniques of teaching reading in order to ensure the best success: that is, the students are equipped with reading skills useful for everyday life, for careers and higher education according to age and potential of the students. (Ministry of Education 1981:22. Ministry of Education 1990:100-101) Prapasri Thangbanjerdsuk carried out research on the reading ability of junior high school students at M.3 level and found that the students were unable to gather events in chronological order, forecast future events and recognize the main theme of the reading selections. (Prapasri Thangbanjerdsuk 1983:61-62)

Efficient teachers of reading understand how to read and can select the correct approach in teaching reading. They also understand the aim of teaching reading. The aim of teaching reading at all levels is based upon encouraging the readers to think and respond to reading materials. This does not only mean that the readers can pronounce the words correctly but they must also understand what they read. If the teacher does not understand how to read and does not know the correct approach to teach reading, the students will not succeed in acquiring reading skills. (Sirirut Nilakupt 1983:23)
The teaching material is an important factor to consider in teaching reading. Ronald White suggested that answering questions following the reading passage encouraged students to think and reflect on the understanding of the text. As he saw it, students answered the questions by copying the answer from the reading passage without real understanding of the whole text. The questions just asked the students to find the answer in the text but not beyond the text. The questions checked understanding at the sentence level. As a result students do not develop skills for effective reading to understand the passage at discourse level. (Ronald White 1981:89) Christine Nuttall in a later study said that the sort of questions following the reading passage should not be tests of memory. The teachers should encourage their students to look for the clues that will lead them to a completely satisfactory interpretation. (Christine Nuttall 1987:22)

Reading is a communicative process, so the text should be authentic. Wisar Jutiwat proposed guidelines for the teaching of reading for communicative purposes: the lessons used should be authentic text applicable in the target situation. (Wisor Jutiwat 1985:42-43) This is in line with Sasipin Bhumiratana and Vannasri Preaphet who have found that using authentic text of everyday situations for teaching reading can motivate students and provide them with knowledge that suits their needs.
However the term "communicative approach" might mislead some teachers of reading. They should not have the idea that using a communicative approach in teaching reading means providing students with a number of authentic texts, thereby ignoring grammatical structures. As a result, the students are unable to interpret those syntactically complex written styles. Very often, sentence complexity indicates the difficulty level of the passage. Eddie Williams states that if the reader has the knowledge of syntax, he can use it to help him read the text. (Eddie Williams 1984:4)

I.M. Schlesinger (1968:15) mentions that syntactic structure is found to be one of the determinants of readability. Understanding the systematic structuring of noun groups and verb groups is more significant for teaching reading than almost any amount of study of individual words (Carl A Lefevre 1962:107).

Christine Nuttall advocates reading as an effective means of extending the students' command of a language. In theory, the aim of reading is "To enable students to read without help unfamiliar authentic texts, at appropriate speed, silently and with adequate understanding." (Christine Nuttal 1987: 19-21) In practice, most students fail to understand thoroughly the meaning of the texts because they lack the knowledge of sentence structure, especially in the following areas:
1) complex noun groups
2) nominalization
3) co-ordination
4) subordination

Students often encounter problems in relation to syntactically complex written style; therefore, their teacher should explain to them the structure of sentences to instil a well-founded grammatical basis needed for text understanding.

Nuttall further states that the interpretation of cohesion devices and discourse connectors is crucial in reading. Students should deal with the skills needed to trace and interpret the way the writer organizes his utterances into a coherent sequence so that they convey the intended message. (Christine Nuttall 1987:89-100)

The researcher contends on the basis of her experience of 7 years English teaching that efficient teachers of reading should be aware that students' problems in understanding of reading texts originate from inadequate understanding of sentence structure, cohesion and discourse connection. Most students also experience difficulty in the areas of vocabulary and paragraph organization. They don't know how to determine the meaning of vocabulary from the context clues. Most of them can't interpret the organization of the paragraph.
The researcher is of the belief that there should be an effective research tool to investigate the problems of the students in attacking a reading text. Up to the present, no research has been done in this area. Therefore one of the main aims of this research is to point out each student’s problems in reading making it possible for the teachers to plan how to solve these problems and to be able to design materials, exercises and methods of teaching for their reading classes. The researcher expects that the result of this study will be beneficial to English teachers at M.6 level and can be used to improve teaching techniques in the future.

The purposes of the study

1. To determine the problems in relation to text reading skills including understanding sentence structure, cohesion discourse connection, vocabulary in context, and paragraph organization of students at M.6 level in demonstration schools affiliated to the Ministry of University Affairs in Thailand.

2. To investigate the problems of and the relationship between the reading ability of students majoring in science and that of students majoring in arts subjects studying in Bangkok and in the provinces at the places mentioned in 1.
3. To investigate the problems of and the relationship between the reading ability of students in general in Bangkok and that of students in general in the provinces at the places mentioned in 1.

Significance of the study

This study will help teachers develop an awareness of existing problems in relation to text reading skills including understanding sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization. Knowing the students’ problems before teaching will help teachers prepare an effective method of teaching, with materials and exercises to suit their students’ needs. Moreover, the test designed for this study can be used to diagnose students’ problems whenever the teachers want to determine the students’ reading ability.

In the demonstration schools, when teachers have understood the students’ problems, they can improve their teaching methods, materials, and activities in the reading class. They can then be good models for other teachers in other schools at the same level according to the roles and duties of the demonstration schools.
Scope and limitation of the study

1. Subjects The subjects involved in this study were students studying at M.6 level in the 1991 academic year in five demonstration schools affiliated to the Ministry of University Affairs in the Bangkok area namely:

The Demonstration School of Chulalongkorn University
The Demonstration School of Srinakharinwirot University Prasarnmit
The Demonstration School of Srinakharinwirot University Pathumwan
The Demonstration School of Kasetsart University
The Demonstration School of Ramkhamhaeng University

Five demonstration schools affiliated to the Ministry of University Affairs in the provinces namely:

The Demonstration School of Chiang-Mai University
The Demonstration School of Prince of Songkla University
The Demonstration School of Khonkaen University
The Demonstration School of Silpakorn University Nakorn Pathom
The Demonstration School of Burapha University
2. **Sample groups** The sample groups were randomly selected from science and arts students studying at M.6 level of each demonstration school by choosing one class from the science program and one class from the arts program or two classes from each school. In schools where there were more than one class in the particular program, random selection was used but in schools with only one class in the program that class was used for sampling in the main study.

3. **Instrument** The sample test would diagnose the reading problems by a thorough evaluation of accuracy reliability after trial with M.6 students of the demonstration schools affiliated to the Ministry of University Affairs not within the sample groups. The instrument was three reading passages with multiple choice questions with four alternatives, one of which was correct, the other three were incorrect. Each correct answer credited one point and each wrong answer credited zero point. The passages for reading were authentic materials in line with the recommendation of the Ministry of Education curriculum. The text consisted of different parts whose aims were to diagnose problems concerning sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization. This test was tried out with a sample group of students who were not the study group to determine the level of difficulty and reliability. Then an item analysis was undertaken to improve the discrimination power of the choices.
4. The variables studied The variables studied were the marks obtained from the test undertaken by the subjects. The marks showed the achievement level of reading in relation to sentence structure, cohesion, discourse connection, vocabulary in context, and paragraph organization. The interpretation of the test is limited by the number of list items in each area of the analysis. The test was designed by the researcher using authentic texts.

Definition of terms

1. M.6 students are the students who are studying at M.6 in the second semester of the 1991 academic year in the demonstration schools affiliated to the Ministry of University Affairs in Thailand.

2. The demonstration schools affiliated to the Ministry of University Affairs in Thailand are:

   The Demonstration School of Chulalongkorn University
   The Demonstration School of Srinakharinwirot University Prasarnmit
   The Demonstration School of Srinakharinwirot University Pathumwan
   The Demonstration School of Kasetsart University
   The Demonstration School of Ramkhamheng University
   The Demonstration School of Chiang-Mai University
The Demonstration School of Prince of Songkla University
The Demonstration School of Khonkaen University
The Demonstration School of Silpakorn University
Nakorn Pathom
The Demonstration School of Burapha University

3. Language proficiency testing is categorized in three areas of difficulty viz

1. **Sentence structure**. The students have to deal with the following:
   - complex noun group
   - nominalization
   - co-ordination
   - subordination
   - participial phrase - present participle
   - participial phrase - past participle
   - prepositional phrase
   - introductory subject
   - definition
   - reference
   - substitution
   - elliptical expression
   - sequential signals
   - exemplification
   - additive
   - adversative
   - causal
- conclusion

2. **Vocabulary in context** The students are required to determine the meaning of words through context.

3. **Paragraph organization** In this area the students are required to deal with:
   - topic
   - main idea of the passage and each paragraph
   - implication /inference
   - prediction
   - sequential organization of the paragraphs in the passage

**Basic Assumption**

It is assumed that the randomly selected students represent the whole population of the M.6 students of the demonstration schools affiliated to the Ministry of University Affairs in Thailand.
CHAPTER II

REVIEW OF RELATED RESEARCH AND LITERATURE

This chapter expresses the views of various researchers and attempts to define the meaning of reading. The chapter is in three parts:

Part I The Theoretical Concept Basis to Reading for Comprehension

1. The meaning of reading
2. Understanding in reading
3. Components that have an effect on reading
4. Levels of ability in reading

Part II Practical Aspects on Teaching Reading for Comprehension

1. Methods of teaching reading in a second language or foreign language
2. The problems of teaching reading
3. Suggestions for selecting materials-authentic or adapted
4. Suggestions for designing exercises to test reading for comprehension

Part III Research Studies in English Reading in Thai Educational Institutions
I. The Theoretical Concept Basis to Reading for Comprehension

Part I will enlarge upon the general definition of reading by going into details of such matter as the meaning and understanding of reading, the components that have an effect on reading and levels of ability in reading, through the views of various researchers in these fields.

The meaning of reading

This section will define the meaning of reading as it is seen by various researchers.

Robert Lado (1967:14) conforms to the general view by saying that reading is a collection of skills whereby interpretation and simple opinion are achieved through an understanding of the meaning and analysis of words, together with an understanding of the text as apparent.

Leonard Bress (1970-127) introduces an aspect of the thinking process and constant up-dating in his view that reading means understanding of the various letters that have been combined together, knowing what each letter represents, then being able to read out the meaning. This is a genuine thinking process and requires constant updating because it is a complex brain process and is an instrument that helps transmit ideas, facts and various feelings from the mind and spirit of the author.
to the mind and spirit of the reader accurately with understanding.

Clifford L. Bush and Mildred H. Hurbner (1970:90) suggest that reading is a process that occurs from the fact that the reader has linked the symbols he reads with his own previous experiences, thus giving rise to a comprehensive idea in the mind of the reader; then there is certain behaviour occurring, that is, there must be interpretation of meaning, reaction to the text which is read, aim of reading and reorganisation of ideas obtained from reading.

Goodman (1972:472) expands on the meaning of reading by proposing the view that reading is a complicated psycholinguistic process in which the reader must reconstruct the meaning which must correspond, or be close to the meaning that the author has given in the text. However, in acquiring such meaning, there has to be interrelationship between letters and the thinking process and linguistic clues as apparent or not apparent in letter form based on the ability of the reader in using the guidance for assumption and prediction.

Smith (1973:6) defines reading as not being a process related to visible ideas essentially, but a process which is related to two kinds of information i.e. information in letter form on paper (visual information) and information from the brain.
or experience (nonvisual information), whereby the latter is more important to reading comprehension than the former. Therefore, analysis for separation of meaning at the word level is unnecessary.

Harry Shaw (1973:272) contends that reading and writing are the same process, that is, the process of communicating meaning of ideas, temperament and various feelings while the author tries to transmit ideas and temperament to others who must in turn try to acknowledge the ideas and temperament of the author. In reading, the reader must use his own ability and experience to bring out the statement from letters into meaning.

Goodman and Burk (1975:5) express the view that reading is a process of interrelationships between reader and author in view of knowledge and ability to use language for communicating meaning, or it may be said that the reader will be able to find out the meaning of what he has read only when he has the knowledge and linguistic ability as well as sufficient experience to understand the language used by the author in transmitting ideas.

Harris and Smith (1976:56-57) opine that reading is a form of communicating meaning. It is an exchange of ideas, information, and knowledge between author and reader in the form of communication of meaning, while the reader will try
to find the meaning of what the author has written, in which case the ability to predict or bring out the meaning from the statement which has been read will depend on the previous experience of the reader, such as acquaintance with the subject matter, the essential idea of the subject and the linguistic knowledge of the reader himself.

Fraida Dubin (1982:4) says that reading is a complex skill that has many components and features combined such as psychological components, physical conditions and social conditions, therefore, reading is the combination of linguistic processes that requires knowledge in several fields.

From the ideas regarding reading of the persons mentioned above, it may be concluded that reading is communication of meaning between author and reader with written statement as media. The duty of the reader is to find out the meaning from written statements. The degree to which the reader will understand the statement he reads will depend on many components such as linguistic ability of the reader and co-experience between reader and author.

Understanding in reading

Following the meaning of reading comes the understanding in reading. By this is meant basically the readers' ability to correctly interpret what the author is trying
to convey. The reader must therefore correctly interpret the meaning of words, groups of words and sentences and the relationship of the sentence components. If the reader cannot correctly carry out such interpretation, it will not be possible to grasp the author's meaning.

Smith (1978:250) supports this view with the contention that the important thing that must be taken into consideration is that meaning obtained from the passage read is not the meaning from the thing that is written or described in letters in printed matter only, but is the meaning that is the idea of the author and the reader. When the reader understands, this means that the reader is able to link the idea of the author with what he already knows. It is a complex process in which the reader must know the meaning of each word, each sentence, then combine the idea of the author which was written in the passage of each page that he reads. If he cannot remember the words or sentence that appeared in the passage for combining into an idea, this is called "incomprehension."

Bond and Tinker (1957:235) also endorse these views that the fundamental components of understanding in reading are composed of understanding of the meaning of words, understanding of meaning of groups of words, understanding of sub-clauses, understanding of the relationship between sub-clauses, and understanding of sentences. The knowledge and understanding of
words is a fundamental of reading. If the reader's knowledge of meaning of words is not sufficient, the reader will not be able to understand sentences, phrases, or the subject matter which is read. The reader must know how to read in groups of words in the sentence, relationships between sentences and relationship between phrases, in order to understand the whole text well because the perception of relationships between these various components will help the reader to be able to recognize the idea of the text that is read.

Samutr Senchaovanij (1985:94) sees understanding in reading as the reader's ability to remember details and information from the text which has been read and to bring it out easily for use or reference as necessary, together with the ability to grasp the important details and to separate or specify the main issue from sub-issues which are not so essential or important in their relationship; also, the reader's ability to assess what should be given special attention and what should be omitted. The reader must also be able to interpret the story or opinion which has been read to the extent of its implication or the depth of meaning and to summarize ideas from the text that has been read correctly, reasonably and reliably while using judgement for considering the various conclusions or references of the author correctly and systematically without confusion. The reader must also be able to transfer or combine appropriately the knowledge obtained from reading with other experience.
Christine Nuttall (1987:80-100) considers the skills a reader needs in order to understand a text. According to this researcher the way the meanings in a text are organized to convey the message is discourse. An analysis of discourse (i.e. how it is produced and organized) has achieved many insights and understandings, but has so far, failed to produce a comprehensive account.

According to Nuttall there are at least four kinds of meaning that a text embodies and that a reader must understand. First, there is conceptual meaning or the meaning a word can have on its own. Concepts can be found at any level, from the whole text down to a single word. Every lexical item embodies a concept, simple or complex, and concepts can be expressed by the smallest meaning units of all, such as the concepts of plurality. All other kinds of meaning are based on conceptual meaning and a text is made by putting all concepts together to form propositions which is the second kind of meaning—that which a sentence can have on its own, even if it is not being used in a context. A word on its own carries no propositional meaning but when it is put into a proposition (sentence) it has a truth value. The signification of a sentence (propositional meaning) is the only kind of meaning it can have when it is cited except in a limited number of cases where the form of the sentence itself gives it a kind of value. For example, "mislead" on its own has no propositional meaning, but when inserted in a sentence "Examination results are misleading" it immediately assumes a
truth value. Again by way of example, "Examination results are misleading" may come under the heading generalization but "A thermometer is an instrument for measuring temperature" is clearly a definition.

The third kind of meaning is contextual meaning—the meaning a sentence can have only when it is in context. When a sentence is used in context it immediately takes on a value derived from the author's reason for using it. For example the proposition "Examination results are misleading" is only a generalization when standing on its own. But if it was to follow this sentence "You should not expel my son just because he has failed", it takes on the value of a justification or explanation. The writer is using it to substantiate the claim that expulsion would be wrong.

Explaining, justifying and so on are often called rhetorical acts. In a text they are sequenced and organized into patterns which display the writer's thoughts and these patterns combine into larger patterns until the writer's overall message is reached.

The last of the four kinds of meaning is pragmatic meaning where a sentence has meaning only as part of the interaction between reader and writer. This is the meaning that reflects the writer's feelings, attitudes and so on and his intention that the reader should understand these.
Nuttall contends "Every sentence has these four kinds of meanings when it is used in a text, though sometimes, one is more important than another. If we want to understand a text completely, in the fullest possible way, we need to understand every sentence in these four ways". (Christine Nuttall 1987:82)

The views of the researchers cited above confirm therefore that understanding in reading calls for ability on the part of the reader to clearly interpret the meaning of words, groups of words, and sentences in order to be able to successfully obtain the meaning the writer is trying to convey.

**Components that have an effect on reading**

There are a number of components which have an effect on reading. First there is the knowledge of words to such extents as width, depth and scope. This embraces an understanding of the word system and sentence structure from the characteristics of written language and the understanding of linguistic symbols. There is the ability to clearly grasp the essential points or main issues of the passage and to foresee the consequential result—that is, the ability to follow the story sequentially. Another component is appreciation which is the ability to perceive the aim of the author to gauge the feeling of
the story and to understand the literary process through which the author's aim is achieved.

The views of various experts on the subject are very similar.

Roger T. Lennon (1961:29-31) describes four components of reading skills.

First, knowledge about words in general refers to such knowledge as width, depth and scope of words; hence, it may be said that extensive knowledge of words or skills in the use of words are the first important things that will lead to achievement of advanced ability of all kinds of reading skill. Lennon suggests that there must be clear understanding of the story that appeared including other skills such as knowledge of the location of passage referred to specifically, understanding of meaning by letters and ability to follow the story sequentially.

It is further suggested that there must be understanding of latent meaning including rationality in reading, ability in giving ideas regarding the story which is read as well as ability to foresee the consequential result, understanding of meaning of words from the story, understanding of the sequential arrangement of the story read, knowing the important idea and reorganization of ideas, understanding of latent meaning present in the passage read by acquiring conclusions or criteria from the story read. However, this skill is related to the skill in understanding the meaning that appears clearly because in order to obtain the
latent meaning of the story read, the reader must understand the literal meaning or the meaning that is visible clearly first.

He concludes with the term of "appreciation" which means the ability to know the intention or aim of the author, the gauging of temperament or feeling of the story, the ability to understand the literary mechanism that has made the author achieve the aim.

David P. Harris (1969:58) generalises on the essential components of reading claiming that knowledge about language and linguistic symbols includes ability to understand the meaning of both easy and difficult words that are presented in the passage, understanding the word system and sentence structure from the characteristics of written language and understanding linguistic symbols such as the various signs, the use of capital letters, the spacing at the beginning of paragraph, and the use of italics.

He also mentions insight into the temperament and style of the story read which includes ability in knowing the opinion of the author toward the story written and toward the reader, understanding of feeling and temperament of the story and ability to specify the method and direction of writing used by the author in expressing ideas.
Guy L. Bond and Miles A. Tinker (1970:235) describe five fundamental components in developing reading ability, starting with the understanding of the meaning of words. This is followed by the understanding of the idea unit, in order to be able to understand the meaning of the sentence. The reader must read in units of idea i.e. dividing the reading into groups of words to have meaning in continuity in groups instead of reading word by word. Then it is understanding the sentence. After one has understood the words and how to read in units of idea, one must know how to relate each word or each section together to gain the meaning in the sentence. Then comes the understanding of the passage that is cut into segments which refers to the ability to link each sentence in that segment together. And finally the understanding of the story and passage read; the reader must be able to understand the relationship between important texts present in each segment.

According to Sirirut Nilakupt (1977:31) the components of an ability in reading are that the reader must understand the language of the author in order to interpret the meaning of the passage read to coincide with the meaning intended by the author. The ability to understand what one reads depends on two components. First, fluency in the use of English by the reader which refers to the level of linguistic knowledge which the reader has learned and the level of knowledge of English used by the author; second, previous experience of the reader. These experiences will help gather, explain, and evaluate the ideas of the author.
In addition, Sirirut Nilakupt has described the components of reading as being composed of certain abilities such as the ability to understand the story read by grasping essential points of the important issues of the story, and to find out the important aims of the text read and to gather and rearrange the ideas in continuation and in relation to the events that will follow, and the ability to search for the important points.

Christine Nuttall (1987:82-84) lists five components affecting reading.

The first component, concepts, is beyond the scope of Nuttall's book—the researcher says "it has often been argued that concept formation is not the job of the language teacher..." and assumes that "the students have a reasonable understanding of the concepts involved...". The next component is vocabulary and sentence structure and here the researcher states it is possible to have a reasonably good idea of a writer's message without understanding the signification of every sentence, that is, its meaning or sense but it is not possible to be absolutely certain of it, nor to give the fullest response without first understanding the vocabulary and sentence structure. The third component is cohesive devices, or the ways of linking sentences together to create a cohesive text. The problems that arise concern the signification of the sentence—if the reader has difficulty with pronoun reference or with supplying the full
version of an elliptical sentence then its signification cannot be established. The next component is discourse markers—words such as "however", "although", "furthermore", "namely", which mark the functional value of a sentence. The researcher contends that although these words do not themselves contribute to the significance of a sentence, that is, its importance or consequence, they are very useful to the reader in establishing the signification.

Finally there are what Nuttall terms "Problems beyond the plain sense". This covers a situation where, although the plain sense of each sentence is understood, the reader may still have difficulty in understanding the text as a whole. This involves the interpretation of value, or the relationship between writer, reader and the text.

Although some of the researchers quoted appear to approach the matter of components that have an effect of reading from different angles, there is a general agreement that, in the main, these components are the knowledge of words including an understanding of the word system, sentence structure and linguistic symbols, together with an ability to understand essential points and foresee the consequential result, and to perceive the aim of the author.
Levels of ability in reading

From an understanding of the components that have an effect on reading it is now pertinent to consider levels of ability in reading.

Many educationalists are divided in their views as to levels of ability in reading with the result that many different opinions are expressed.

Thomas C. Barrette (1965: 8-25) has classified levels of ability in reading into five levels, commencing with "literal comprehension" i.e. reading to grasp the various points and details, grasping the important issues and arranging the sequences of events, to differentiating between comparison and contrast in the passage, knowing the relationship between cause and effect, knowing the special characteristics in the story read and remembering and recalling the story read.

He then proceeds to "reorganization" i.e. ability to separate the categories of the passage read, ability to make a summary of the whole story read or some passages, ability to summarize and synthesize the story read.

This is followed by "inferential comprehension" i.e. ability to draw out ideas and details obtained from reading, ideas and private experience for use in making summary and giving opinion in the aspect of giving elaboration, summarizing the important issues, arranging the sequence of events and
interpretation of language that is not directly apparent from the passage read.

Next comes "evaluation" which is the level of ability to decide and evaluate by oneself what is fact, what is imagination, what is opinion from the story read and the ability to evaluate the trustworthiness of the story read and evaluate in the aspect of personal opinion whether the passage has the appropriate value for acceptance.

He concludes with "appreciation". The ability in this level is reading in the highest level i.e. having a responsive temperament according to the story and according to the language of the author and the creation of image and expression of temperament from having read the story.

Smith (1963:252) classifies three levels of reading ability viz literal comprehension, interpretation and critical reading. He states that the last named must be based on the first two levels.

Literal comprehension is a basic level of understanding i.e. the reader can understand what the author has written explicitly.

Interpretation i.e. the reader can understand the meaning of the passage read more deeply than the first level. This is interpretation of what the author has not said directly but it is the latent meaning in the text.
Critical reading i.e. reading that must be based on the first two levels of understanding. This is the reading in which the reader must use his thinking to analyze, decide and evaluate what he reads.

Nicolas Ferguson (1973:75-83) agrees with Smith's (1963:252) three levels and adds another level—"creative thinking." In Ferguson's view, "literal comprehension" refers to ability to understand the meaning which is shown explicitly in the words, ideas or sentences in the text read. "Interpretation" refers to understanding of meaning that is shown directly and one has to rely on careful reading, summarizing and consideration of the cause and effect, expectation of what will occur, and comparison as well as the perception of various relationships. "Critical evaluation" refers to the ability to judge and decide on quality, correctness and reality of stories. The reader must be able to evaluate the purpose of the author in writing, such as for entertainment or giving of knowledge about various subjects, to induce the reader to go along with him. His view on "creative thinking" is the reader must have the ability to create new ideas after reading a text.

Burmeister (1974:147-148) whilst generally agreeing with the foregoing researchers, classifies seven levels of reading ability viz memory, translation, interpretation, application, analysis, synthesis and evaluation.
Memory is a level of remembering what the author has said, namely remembering or understanding facts, dates, definitions, main gists of the story and sequences of events of the story.

Translation is translating the passage or what is understood into other forms such as the translation from one language into another language, the transfer of ideas of the story into diagrams.

Interpretation is the understanding and perception of the relation of what has not been stated by the author such as the finding of cause of a given effect, the expectation, subsequent happening and the grasping of the gist of the story that has not been stated by the author.

Application is understanding the passage read to the extent that the knowledge obtained from it can be successfully applied in other situations.

Analysis is the fact that the reader can differentiate the minor components for reassembly for the most part such as analysis of the written work, examine the giving of wrong reasoning and making inference on what was read.

Synthesis is the combining and reorganizing of the ideas obtained from reading.

Evaluation is the fixing of criteria and then deciding what was read based on the criteria which was fixed as standard such as what part of the story read is fact and what is fantasy, what is opinion and what is belief.
The research of Rebecca M. Valette and Renee S. Disick (1972:161-162) has a basic underlying agreement with the other researchers referred to, but the classification and approach to the five different levels of reading ability is somewhat different.

Valette and Disick start with "mechanical skills" through which the student will be able to see the difference between spelling in a foreign language and can tell the similarity and difference. At this level there is no need to understand meaning.

The researchers continue with "knowledge" by which the student can read familiar sentences or passages and understand the meaning, can tell which word or passage corresponds with the picture seen. Reading at this level usually is reading sentence by sentence.

Their next level is "transfer" in which the student can understand new passages that have words and grammatical structures that have been learned.

The level of "communication" follows. Here the student can read a passage that contains new words and structures or words that have the same root as the words the students has already read and understood although he may not understand every word but he can grasp the main gist of the story.

The last level is "criticism" by which the student can understand latent meaning, aim, opinion, idea and the level of language used by the author.
Ajchara Wongsothorn (1985:408-409) also classifies levels of reading ability into seven levels but the approach and content are somewhat different from the other researchers already referred to. First, the ability to read English letters and understand easy public notices in general. Second, the ability to tell the subject heading of the passage and be able to tell briefly about the subject of a public notice that has a complicated text and be able to understand figurative tables and various diagrams that contain no English words. The third level is the ability to understand subject heading and brief text of what was read without the need to consult a dictionary and understand the details. When a dictionary is consulted frequently, the reading is slow and if reading is done quickly this will make the reader unable to understand the passages which are being read for the most part.

The next level is the ability to sufficiently understand the text read but with the possibility of repeat reading when the text is complicated, ability to grasp the gist from the story read or general story, but still unable to note the change of writing style in the text read, and only able to know that there are words of a different category to the words in other segments which appeared in the text. The reader has to consult a dictionary to understand the details, the reading is still slow.
Next comes the ability to read all kinds of passages with good understanding, to note and understand the various types of writing styles, repeated reading is infrequent, but the reader still has to consult a dictionary when reading the passage in a subject unfamiliar to the reader. The reader is able to read general text easily but still slower than the native language speaker. There is repeated reading only when the passage is in an unfamiliar field, and reading is faster than the beginning levels for the most part.

The sixth level is the ability to read all kinds of texts with very good understanding. The only difference from the native language speaker is the speed and fluency of reading. This level is the reading ability level of the person who uses English frequently.

The seventh and final level is to understand what is being read perfectly, the rate of reading and understanding being the same as that of the native educated language reader. This level is the reading ability level of the person who uses English regularly in all skills areas i.e. listening, speaking, writing, and reading.

It will be seen that the levels of reading ability vary from three to seven depending on the approach of the researchers to the subject and the focus of the research.
However there is a general agreement as to minimal levels at the lower end of the scale and optimum levels at the upper end of the scale.

Generally the minimal level appears to be literal comprehension which is, briefly, comprehension of the important points or details which are agreement of sequence comparison of cause and effect and the characteristics of the story. At the other end of the scale there is appreciation, that is, the ability to understand perfectly what is being read, the rate of reading and understanding being the same as an educated native language reader.

II Practical Aspects of Teaching Reading For Comprehension

Methods of teaching reading in a second or foreign language

Many different methods have been proposed for the teaching of reading in a second or foreign language. The following are the ideas of some experts on the subject.

Wilga M. Rivers (1968: 213-239) proposes that the aim of teaching reading should be directed towards enabling the student to read fluently and understand correctly without
assistance. This can only be achieved by dividing the teaching into steps according to the students' ability, commencing with simple conversations with the teacher. This is followed by reading the conversation from texts which will include additional vocabulary. The student is then encouraged to develop the habit of enjoying reading through non-complicated interesting reading including new words and writing styles. Next, outside classroom reading supplements intensive inclass reading until the student can read by himself and be capable of discussion and analysis of what has been read. The student is then ready to successfully tackle such reading matter as foreign journals and newspapers.

Mary Finocchiaro (1974:77) expresses the same basic views as Wilga M. Rivers but expands on some aspects. For example in the simple conversation stage, this researcher stresses the need for pronunciation and mind retention training skills on the part of the teacher so that the student understands clearly before embarking on reading by himself. Finocchiaro also supports the development of reading skills through increased vocabulary by way of similar words in groups, contextual clues and words having the same roots. Understanding the culture of the native language speaker is also suggested to obtain a greater in-depth meaning of words through aids such as pictures, diagrams, or plans. The use of guiding questions by the teacher is also advocated, starting with questions requiring simple "Yes/No" answers to questions requiring more thought and understanding by the student. Finally, Finocchiaro advocates training in reading quickly from the early stage of silent
reading of short texts, progressing to more advanced reading with recorded time checks and test scores for comprehension.

Tipawal Masaeng (1978: 50-58) also researched speed reading, advocating that the student should be trained to read a story in its entirety and then grasp the main idea immediately, rather than translating word by word or sentence by sentence which tends to lead to inconsistency in context. In the process, difficult vocabulary is skipped and the use of the dictionary is discouraged as these slow down reading. Reading should be guided by the thinking process and Masaeng also says that time and reading content should be fixed in accordance with the ability level of the student. Students should also be taught to practise silent reading without mouth formation of the words.

Alfred Newton Smith (1978:1480-A) also agrees on the importance of time provided for studying listening and speaking before actual reading. Reading should begin with the whole sentence the content of which is already known and proceed through preliminary sentence structure analysis and finding literal meaning to lead to understanding at a higher level. Simplification of meaning and analytical reading should be given greater importance as the students’ level of ability advances. Newton Smith advocates planning for students to regularly practise reading aloud as well as silently to develop their ability.
Uthai Phiromruen (1984: 17-18) suggests that in reading for comprehension students should be taught to read widely to see what they want to learn. They should be helped in understanding linguistic form such as structure, sentences and meaning of vocabulary. They should also be taught to understand on the basis of contextual clues and to anticipate while reading. This should be followed by a self-test to ascertain the correctness or otherwise of their anticipation which can be done through key answers or with the help of a dictionary. Finally the students should be taught to gather all the ideas they have obtained from the passage and put them together in clear comprehension of the text.

Issara Sara-ngam (1986: 17-36) has put together eleven techniques or strategies in teaching English in a research work regarding the problems of using English teaching techniques of secondary school teachers.

These techniques include teaching the students to understand the meaning of grammatical structure, for example

The bird has eaten.

The bird has been eaten.

examples of the present perfect tense and passive voice which, if not understood, will lead to incorrect interpretation of these two sentences. Also included is the method of analysing the morphology of words—that is teaching the student to separate the components of words, to find the correct meaning through working out the meaning of the component parts and the whole word.
The techniques include teaching the students how to utilize grammatical clues. For example:

"They usually puzzle out the meaning or guess the meaning by using clues."

From this sentence it may be seen that the word that is placed behind "or" tells the meaning of the preceding words. And how to determine the meaning based on context clues which have several features such as definition, synonyms and antonyms.

The interpretation of metaphors and similes is also included and because metaphors are used to compare the actions of human beings and other things—generally with animals and objects and the behaviour of such, so, the student must know the shape, countenance, posture, habit of such things, to correctly interpret the metaphor. For example:

"Betty, your bedroom is a jungle."

The reader must know the characteristics of the jungle, what it looks like, in order to be able to interpret correctly.

Teaching the student how to guess the meaning of words by observing the use of punctuation marks is also included in the following example. The colon is used to indicate that what follows is additional information.

"He had a profound influence on me: he changed my political ideas and my way of life."

The next technique is teaching students to understand transitional markers, which will enable them to read the passage more easily. These transitional markers have several features as they may be adverbs and conjunctions which aid in anticipating
the direction or writing of the author. For example, the various words which express additional ideas such as "in addition", those which express contradiction such as "however", those which express conclusion of idea such as "consequently".

There follows the technique of using pronouns by teaching the students what each pronoun in the statement represents. Usually, the author will use various kinds of pronouns to avoid repeating names, animals, and objects that are alluded to subsequently.

Sara-ngam now turns to the use of the dictionary which the researcher says should be used only as a last method and after all other methods have failed. The meaning of the word so obtained, should be recorded together with the correct use.

Next is the technique of teaching the students how to use the method of searching for the main sentence of the story (topic sentence) in a passage which is composed of several paragraphs. Some paragraphs will have a topic sentence which contains the important gist of that paragraph, and the teacher should let the student practise searching for the topic sentence which usually will be in the first or last paragraph of a passage.

The last technique is teaching the students to search for the main idea of the story. Usually, in a story, there are many paragraphs in each of which the author may express only a single main idea while the rest will be supporting details. To know what is the main idea of the author, one must observe whether the author mentions the idea frequently or not, or consider from
various sentences to what idea they are linked. In addition, the title should help convey the main idea of the text.

Sirirut Nilakupt (1987:21-23) commences her research with a proposal to develop reading skills through 5 text characteristics namely "description" that is an overall description of the passage, "enumeration" which gives additional explanation according to time sequence or steps, using such words as "first", "second" and "finally" for example. The cause of any consequence or vice versa is alluded to in the causation characteristic with such word indicators as "so that", "thus", "in order to ", "because of", "as a result". The fourth characteristic is the problem and its solution where examples of word indicators are "a solution is....", "have solved this problem by....". The last characteristic is comparison which has two features-comparison of similarity and comparison of difference. Word indicators include "different from", "same as", "alike", "similar to" and "resemble".

Nilakupt then deals with the subject of main idea, stating that some paragraphs have topic sentences which indicate main idea and some do not. In the former case, the students should be encouraged to practise finding the topic sentence first and should then go on to finding the main idea through helping questions from the teacher such as

What is the paragraph about?

What does this paragraph tell us about...?
What is the article about?
"Sleep"

What does this article tell us about sleep?
"Natural sleep is the best" (main idea)

In indicating the purpose of the author, the researcher stresses that the teacher must first teach the students to grasp the ideas of the text before proceeding on to the purpose of the author such as telling stories, describing things, persuading readers to believe what he says, giving information, etc. The researcher contends that indicating the authors' mood as joyful, sentimental, critical, scientific is a critical reading skill which is difficult for students not trained in this skill. Nilakupt further states that the student must not only be able to separate fact from what is the opinion of the author, but also to assess the trustworthiness of the author in deciding whether to accept the expressed opinion of the author or not.

From the foregoing it can be established that the main aim in the teaching of reading is to teach the student to read fluently and to understand the text without assistance. The methods for achieving this aim vary in detail but conform in basic concept. For example, the concept of having a purpose or target in reading and the selection of the type of books to be read is generally agreed amongst researchers as is the concept of determining meanings (vocabulary) either through context or guesswork. Also considered of importance by the researchers is the students' understanding of sentence structure. Another important concept is the students' ability to grasp the main idea.
of the text and to follow the author's idea throughout. Generally considered detrimental to teaching reading is the practice of translating word by word or sentence by sentence as this leads to inconsistency in context.

The problems of teaching reading

The teaching methods currently employed in many Thai schools are not good enough with the result that students are unsuccessful. Support for this contention is to be found in the research by Aungkana Wongsanit (1981: 65-87), Kanungnid Rattanapinyopong (1983: 43) Prapasri Thangbanjerdsvuk (1983: 60-63) and Sumontha Wiruhayn (1988: 80-82). Their research is discussed in detail in Part III Research Studies in English Reading in Thai Educational Institutions. Having documented the methods of teaching reading we shall now consider some of the problems in this field.

In chapter I the research carried out by Ronald White (1981: 89), the Faculty of Humanities, Srinakharinwirot University, Pathumwan (1985: 399), I.M. Schlesinger and Carl A. Lefevre (Schlesinger 1968: 23, Carl A Lefevre 1962: 107) have already been referred to.

Christine Nuttall (1987: 85-100) also contends that students fail to understand thoroughly the meaning of texts because they lack the knowledge of sentence structure, especially areas of complex noun groups, nominalization, co-ordination, subordination, and participial and prepositional phrases as modifiers.
For example, dealing with complex noun groups Nuttall suggests the head noun in a suitable example is identified by the teacher and the students then draw brackets round the entire noun group and identify the kinds of item that follow the head word, labelling them and analysing them into their constituent parts according to set procedures.

The point is that if a student knows what structures a noun group may have, he is able to identify the structure it has in the text he is reading.

With regard to nominalization, Nuttall agrees that this is a major problem in academic texts. She suggests that first students must be taught to recognize nominalizations. The forming of nouns from verbs is within a limited range and not difficult to recognize. Students may already be able to recognize most of them but are unlikely to realize how complex they can make a sentence. Nominalizations usually conceal unstated propositions and the key is to work out these implied propositions. Hence, Nuttall's procedure for dealing with nominalization is to first identify the nominalization, then work out the implied proposition and finally work out the place of the proposition in the rest of the sentence.

According to Nuttall, co-ordination is not usually difficult in itself, but in a complex sentence it may be difficult to isolate the two parallel parts of the sentence that are joined by "and/or/but". Often it is hard to determine the extent of the parts joined: are they single words, phrases or what? The two parts are always parallel and stand in the same
relationship to some other part of the sentence (unless, of course, they are co-ordinate clauses constituting the whole sentence.)

Subordinate noun clauses are often troublesome, in Nuttall's opinion, because they make it difficult for the reader to identify the subject or object of the sentence. Here is an example:

How difficult it is for the medically trained, and those whose work is based on the current concepts of medical science, to envisage all the barriers that others lower down the social scale will find in the way of their accepting what seems such a simple ordinary test, is seen from some recent studies in the USA.

(Christine Nuttall 1987:87)

To cope with difficulties of this kind, Nuttall suggests use of the "what does what" approach. When likely difficulties are encountered in the text, identify the verbs affected and ask the students to discover the subject or object by asking themselves the question "Who (or what) does (or is) what". When the verb is in the passive, Nuttall suggests it is helpful to devise an active sentence and the question would then be "who does what".

In Nuttall's view the problem with participial phrases is, generally, to know where to put them. Nuttall suggests that all participials can be handled by the "what does what" method described in the foregoing paragraph and that this is really the best method of finding out where they belong. Writing on prepositional phrases, Nuttall says the problem is
usually not great, except when there is a number of them. Here is an example of prepositional phrases:

It is, for instance, all too easy, in our anxiety to stress the ravages of lung cancer in heavy cigarette smokers to raise a new bogey in the public mind to add to those nameless terrors of the disease that we are trying to combat by other means.

(Christine Nuttall 1987:88)

In such a case, the procedure the student should adopt will include checking which instances are generally prepositions and which belong to infinitive verbs, checking whether there are any words in the text that regularly go with a preposition and linking them with the preposition if it is there. For other prepositions, finding out which two nouns are joined by enough one and linking them, and finally, dealing with prepositions that do not fall into the foregoing categories.

Nuttall further states that the interpretation of cohesive devices and discourse connectors is crucial in reading. Students should deal with the skills needed to trace and interpret the way the writer organizes his utterances into coherent sequence so that they convey the intended message.

Nuttall appears to treat these problems in the most detail, emphasizing the need to teach proper understanding of sentence structure, cohesive devices and discourse markers. The other researchers quoted tend more to cite failings on the part of the teachers viz lack of motivation, monotony, and lack of interest in certain directions.
Suggestions for selecting materials-authentic or adapted

In the matter of selecting reading materials there is a choice between authenticity and adaptation.

Grellet (1982:7) Johnson (1984:2-7) and Richards and Rogers (1986:80) propose that students read authentic text, such as, a notice, a journal, an advertisement or a newspaper. They are against adaptation or simplification to make for easier comprehension contending that this could result in deviation from, or misrepresentation of, the original text and the objectives of the writer. Johnson (1984:2-11) further advocates as an important feature, the use of language that is used in everyday situations as this also helps in solving some of the complexities of grammar and vocabulary. Text-books which do not provide realistic situations should be avoided. For example, students reading the news in their own language first will find it easier to cope with vocabulary and grammatical structure when they read the same news in an English newspaper later. Grellet further states that adaptation or simplification leads to the lack of a system of references. The system of references always appears in the authentic text which is necessary for the students' motivation.

Richards and Rogers (1986:80) also stress that the use of authentic text including daily life situations provides the motivation for enthusiasm in reading and teaching. They, too, advocate the use of newspapers, advertisements and add to the list such items as diaries, memos, telegrams, letters,
postcards, written instructions, recipes, prescriptions, labels, application forms, train and airplane timetables, maps, diagrams and telephone directories.

Suthira Hemthsilpa (1986:43) completed a comparative study of M.4 students’ achievement in English reading using authentic materials and a text book. The sample group consisted of 58 M.4 students of the Demonstration School, Prince of Songkla University, Pattani Campus. Half of the students were randomly selected as an experimental group using authentic materials, and the other half as a control group using a text-book. The result indicated that the students’ achievement using authentic materials was significantly higher than that using a text-book.

Candlin (1983:21-55) also advocates the use of authentic text and emphasizes the use of real (everyday) language as the medium for the teaching and discussions as this encourages the student’s understanding and participation.

Christine Nuttall (1987:32) warns of the dangers in simplification and of adaptation. She says that simplification needs to be done with discretion. Simplification removes many of the barriers to understanding but care is necessary, otherwise the basic qualities such as discourse may also be removed. Thus, in simplifying, it is important not to go too far. Also if everything is made explicit the student cannot develop the capability to infer. The ideal is to preserve whatever is in the original as much as possible.
H.G. Widdowson (1979:79-91) proposes an interesting concept with regard to selecting materials which emphasizes letting the learner communicate what he has read. His idea is different from the foregoing researchers in some points. The idea is expanded in three types of statement.

The first statement deals with "extracts". "Extracts" is the portion which is extracted from other texts which may contain matters related to subjects in the course being studied by the students. This will draw the interest and make the students understand more easily, probably by letting them read the first three or four paragraphs in their native language, then letting them read in the foreign language in the following paragraphs in order to relate the ideas. If the language used is too difficult, this can be solved by explaining the meaning of the difficult vocabulary first and explanation may be given on the partial meaning of the statement to let the students understand the statement better.

The second statement concerns "simplified versions" which is the simplification of statements by using easy words instead of difficult words, such as the use of "about" instead of "approximately".

Widdowson's third statement is "simple accounts" which is a statement rewritten by making the content easier, having less complexity, and suitable to the level of knowledge of the student. The difference between "simple accounts" and "simplified version", is that "simple accounts form" is a change in content and data, while the "simplified versions" is a change in the aspect of the use of language.
The conclusion to be drawn from the above argument is that authentic text is preferable and should be related to everyday situations as the latter provide motivation for the students' enthusiasm and also helps in understanding. The text should not, if possible, be adapted or simplified, (although Widdowson appears to disagree), as this could result in deviation from and misrepresentation of the objectives of the writer. As Nuttall points out: "if simplification and adaptation is necessary, then the ideal is to preserve whatever in the original will appeal to the intelligence of the student, while removing those elements (new words, complex sentences) which intelligence alone cannot deal with. Above all, retain as much as possible of the textual quality and discourse structure of the original." (Christine Nuttall 1987:32)

Suggestions for designing exercises to test reading for comprehension

After selecting materials and deciding on authenticity or adaptation, we now consider suggestions for designing exercises to test reading for comprehension.

Rebecca M. Valette and Renee s. Disick (1972:162-170) propose a designing exercise in five levels four of which concern reading comprehension commencing with "mechanical skills". At this level students can distinguish between small and capital letters also between words and sentences by spelling, and differentiate between writing styles. For instance they can
recognize the difference by spelling between "dog" and "cat". They can also differentiate between dialogue, poems, letters, etc.

The second level is "knowledge" and here the students can retain the knowledge of previously learnt words and sentences by matching them with sounds. They are also able to match sentences with pictures. They understand the meaning of punctuation and they can match abbreviations with the appropriate full form. They can also answer questions based on what they have read.

The third level is "communication." By this level the students understand previously unseen text by answering questions. They can arrive at the text main idea either orally or in writing and they are capable of prediction. From provided information they can distinguish what is relevant and what is not relevant to the text.

The last level is "criticism" where the students can criticize what they have read by answering questions on the author’s idea. They can express ideas on the characters in a story either orally or in writing and they can evaluate the appropriateness of the language used by the author in relation to his style of writing.

J.B. Heaton (1979:103-105) approaches the testing of reading through five steps commencing with matching i.e. the matching of words with words, sentences with sentences, and a sentence with pictures. The second step is a "true or false" exercise (establishment of general fact and text fact). Heaton contends that this is not very satisfactory as the students are given two alternatives, that is, a fifty/fifty guessing chance. He
suggests 2 points for a correct answer and a penalty point (-1) for an incorrect answer to discourage the students from guessing. The third step is answering through multiple choice to test vocabulary, sentence structure and reading comprehension. The next step is sentence completion and the final step is cloze (the insertion of missing words at regular intervals in a text by (a) from given words and (b) acceptable words supplied by the students).

H.G. Widdowson (1979:95) proposes the use of two kinds of questions for testing of understanding in reading. The first type of question concerns content of text where the information is obtained directly through questions that require answers in information or reason (wh-questions) or polar questions, truth assessment questions and multiple choice. The second type concerns the function of words in the sentence which, in itself, has two levels. First, word reference which is the question to ask for understanding of words and sentences that specify whether understanding is correct or not. This level does not emphasize interpretation. Then there is inference which indicates the level of the students' reading ability. Here the stress is on the students' recognition of the author's ideas and the story read.

In his analysis, Widdowson emphasizes that the truth assessment questions and multiple choice questions should be dealt with well by the students with better performance for truth assessment questions than multiple choice questions because the students are not confused with other deceptive information.
However, he points out that there is one disadvantage in that students may use guesswork, and the solution will increase the instructions in the truth assessment questions by letting the students write additional reasons to examine their understanding. The students may be instructed to explain the use of such reference words as, "this" or "it" in context, to improve their ability in interpretation.

Grellet (1982:19) says the items to test reading comprehension should take the form of problem solving by searching through the text for the answer. Chosen texts for this method of testing should be taken from newspapers, price lists of goods, radio and television programs and should be in the format of charts or diagrams which the students will complete.

Wisar Jutiwat (1985:43) contends that testing should not emphasize only the students' understanding in reading but rather should be directed towards the students' ability to draw out the deeper meaning in the text. The researcher advocates a true or false method for the questions because this will encourage the student to think more deeply before answering the questions. Other formats should be a chart, map, graph or picture to help the students to better understand what they have read.

In "Learning to Read and Reading to Learn" Kanda Thammongkol (1991:v-vii) deals with designing of exercises to test reading for comprehension. In her view the exercises should start with vocabulary building including the use of context
clues, prefixes, suffixes, combining forms and Latin and Greek roots to increase the students' vocabulary. Also considered important are discourse, cohesion and coherence in complex sentence structure. It is further recommended that the exercises should cover text organization to convey the intended message as well as the main idea and supporting details.

Malinee Chantawimon (1991:Preface) states that teachers should not encourage students to remember the meaning of vocabulary only, rather, the exercise should include allowing the students to guess the answers from context clues, roots, prefixes and suffixes. Vocabulary should be first categorized and grouped by category. The exercise should include matching (words and meanings) and at the higher level, the number of words and the number of meanings should not be equal. Also to be included should be completing sentences from given words. In the area of answering questions, questions should concern the main idea and details of the passage together with the author's opinion. At lower levels the questions should be simple but at higher levels they should be more complicated and so designed as to motivate the students to use their own ideas in answering the questions.

It will be seen that the researchers quoted above approach the subject from different angles. Valette and Disick clearly define five levels starting from the low level of recognizing letters and working up to the level of criticism.
Grellet says the students must search the text for answers. Heaton and Widdowson have broadly similar ideas and agree that the True/False method is not satisfactory whereas Wisar Jutiwat advocates True/False method as a tool for making the students think. The views expressed by Malinee Chantawimon agree with those of Valette and Disick. Kanda Thammongkol's recommendations offer a comprehensive basis for the preparation of designing exercises.

III Research Studies in English Reading in Thai Educational Institutions

In this part of the study, nine representative experiments are used to present a clear idea not only of what work has been done in the problems concerning text reading skills, but also to illustrate the various ways in which such research prospects have been designed and carried out.

Warinee Srisompong (1973:57-58) set out to study the relationship between English structures and vocabulary and the ability in reading English of M.3 students, using as her subjects 370 M.3 students. The procedure adopted was to use three test papers - one covering understanding in English structures, one in vocabulary and one covering the ability to read English. The study found that the knowledge of English structure and vocabulary related to ability in reading, and could predict reading ability.
The purpose of Chariya Onprapai (1975:51-53) was to study the relationship between the knowledge of English grammatical structure and the understanding in reading English of M.3 students. The subject of this study was a group of 200 M.3 students and the researcher used two test papers – one comprising English grammatical structure and the other covering the understanding of reading English. The result showed a high correlation between the knowledge of English grammatical structure and the understanding of reading English.

Rarinthip Charoensuk (1975:62-64) researched the relationship between understanding English grammatical structure, vocabulary and reading English ability of M.4 students, using a group of 180 M.4 students. Three test papers were used—one for knowledge and understanding of English grammatical structure, one for vocabulary, and one for ability in reading English. The study found that the knowledge and understanding of English grammatical structure and vocabulary could serve as a predictor of the reading ability of the students. The students who got high level marks in English grammatical structure would get high marks in reading English. The study also found that in the field of vocabulary there was no difference in knowledge level between boy and girl students but the boys had a higher level of knowledge in the area of English grammatical structure.

These three pieces of research reveal common points of interest namely that the knowledge and understanding of
grammatical structure and vocabulary related to the ability in understanding reading of English. Also the knowledge and understanding of grammatical structure could predict the reading ability of the students. If students got high marks in grammatical structure, they would get high marks in reading.

Saowapak Sriwijarn's (1978:44-46) research was a comparative study of English syntax comprehension in reading comprehension of technical business students in Bangkok. The students came from three campuses of the Institute of Technology and Vocational Education in Bangkok and were in their fifth year. Two test papers were used - one in the type of multiple choice on English syntax, and one in the type of cloze for reading comprehension. The selected syntax were negation, nominalization, embedding, deletion and passive voice. The study found that English syntax that caused problems listed by the levels of difficulty are as follows - passive voice, embedding, negation, nominalization and deletion.

This study produced the same result as the three mentioned above although the level of the students was different, that is, the knowledge of sentence structure related to the understanding of an ability in reading. There was also agreement with Christine Nuttall's contention that the students failed to understand thoroughly the meaning of the text because they lacked the knowledge of sentence structure in the area of complex noun groups, nominalization, co-ordination, subordination, and participial and prepositional phrases as modifiers.
Aungkana Wongsanit (1981:65-67) researched the ability in reading English at the level of transfer, communication and criticism of M.3 students in government schools in Nonthaburi Province. Nine government schools were included in the study and the student group numbered 356. A test paper in the form of multiple choice to ascertain the students' reading ability at the level of transfer, communication and criticism was used. The study found that level in reading of students in the three areas was below the researcher's expectation of 70% individually and collectively. The level of the student reading in each school was below the researcher's expectation of 70%.

Kanungnid Rattanapinyopong (1983:43) studied the same levels as Aungkana Wongsanit but used 340 first year students at the College of Commerce. A test paper was used to ascertain the students' level of ability and the test comprised multiple choice answers to questions with 4 alternatives. There were 6 questions - 2 each for transfer, communication and criticism. The result indicated a level of reading ability in the three areas concerned, below the researcher's expectation of 80%, and there was no significant difference among the means of the three levels.

Prapasri Thangbanjerdsuk (1983:60-63) set out to ascertain the ability of reading English at the level of interpretation of M.3 students in the English programme in Chainat Province. The subject group comprised 386 students. A test paper was used comprising reading for the main idea,
arranging in sequential order, cause and effect, drawing conclusion and prediction. Each of the skills contained ten items constructed from passages of 30 to 50 words. The result showed that the level of reading English in the areas concerned was below the average level when compared to the Ministry of Education standard which is 80 - 100 marks = Grade A

70 - 79 marks = Grade B

60 - 69 marks = Grade C

50 - 59 marks = Grade D

Below 50 marks = Fail.

The bench mark for passing or failing is 50, that is, half marks. Above 50 grades go from D to B. Above 80 is considered top grade. The students had problems in all five areas of the test paper, the most problematical being sequential order (11.25%), followed by prediction (12.80%), cause and effect (24.54%), and drawing conclusion (27.20%) in that order. The least problematical area was main idea (33.68%).

Sumontha Wiruhayan (1988:80-82) studied the reading English ability of students at the upper secondary education level using, as the subjects, 1440 M. 4 to M. 6 students from schools under the General Education Department in the Ministry of Education. A test paper comprising five levels of comprehension viz mechanical skills, knowledge, transfer, communication and criticism, was used with 20 questions at each level. The study found that M. 4 students had English reading ability (mechanical skills) at a level of 15 marks out of 20. M. 5 and M. 6 students had English reading ability (mechanical skills and knowledge) at
a level of 15 marks out of 20. The average score of M.6 students was higher than that of M.5 students which itself was higher than that of M.4 students.

The purpose of the research carried out by Kulaya Benchakan (1984:2871-A) was to study methods for teaching reading to Thai university students. The students were chosen at random from different faculties at Silpakorn University. The test comprised a questionnaire of two parts. In Part I the students were required to give information about themselves. In Part II the students were required to relate some of their problems in learning English. The research showed that the university students found reading very important but they could not understand what they read because of a lack of knowledge of vocabulary and sentence structure. Problems were encountered at critical level and difficulty was experienced with finding the theme or main idea of read passages. There was also a need for more motivation in learning. The researcher proposed that the teacher should teach the students to guess the meaning from clues and put more stress on teaching grammatical features that were problematical for the students.

From the above research, it is apparent that knowledge of grammar and sentence structure relate to ability in reading English. Problems exist in the areas of transfer, communication, criticism, arranging in sequential order, prediction, cause and effect, drawing conclusion and main idea all of which are important in reading ability. Sufficient knowledge in these areas hinders the development in reading.
CHAPTER III
RESEARCH METHODOLOGY

This study was undertaken to determine the problems in relation to text reading skills including understanding sentence structure, cohesion, discourse connection, vocabulary in context, and paragraph organization of the students at M.6 level in the demonstration schools affiliated to the Ministry of University Affairs in Thailand and also to determine whether science and arts students studying in Bangkok and in the provinces at the places mentioned above had similar problems or not. This chapter describes the target subjects, test instrument and administration as well as statistical devices used for analyzing all data.

Subjects

The subjects employed in this study were the M.6 students attending classes in the second semester of the 1991 academic year in ten demonstration schools affiliated to the Ministry of University Affairs. In selecting these sample groups, the researcher purposely chose one class from the science program and one class from the arts program or two classes from each school. In schools where there were more than one class in the particular program, random selection was used but in schools with only one class in the program that class was used for sampling in the main study.
TABLE A shows the number of the subjects in each school and each program.

### TABLE A
Number of the Subjects

<table>
<thead>
<tr>
<th>The Demonstration Schools Affiliated to the Ministry of University Affairs</th>
<th>Science Program</th>
<th>Arts Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chulalongkorn University</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>2. Srinakharinwirot University</td>
<td>普拉山密特</td>
<td>28</td>
</tr>
<tr>
<td>3. Srinakharinwirot University</td>
<td>普拉萨姆万</td>
<td>31</td>
</tr>
<tr>
<td>4. Kasetsart University</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td>5. Ramkhamhaeng University</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>6. Chiang-Mai University</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>7. Khonkaen University</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>8. Prince of Songkla University</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>9. Silpakorn University</td>
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<td></td>
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<tr>
<td></td>
<td>纳孔府府</td>
<td>19</td>
</tr>
<tr>
<td>10. Burapha University</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>272</strong></td>
<td><strong>224</strong></td>
</tr>
</tbody>
</table>

The demonstration schools no.1 to 5 are in Bangkok and no.6 to 10 are in the provinces.
Test Instrument

The instrument employed in this study was a test to diagnose the students' problems in reading authentic texts in relation to understanding sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization. Three passages - "From Grape to Table" (Deirdre Barker 1985:30), "Latchkey Children- Knock, Knock, Is Anybody Home?" (Betty Sobel/ Lorraine C. Smith 1986:25-27,) and "Dietary Lessons from Human Evolution" (Jane E. Brody 1985) - were selected using a criterion according to the Ministry of Education standards (Ministry of Education 1981:22, Ministry of Education 1990: 100-101) as mentioned in Chapter I. There was adaptation of passages which were thought to be too difficult for the level of participating students but the greater part of the text was not adapted in any way. Language proficiency was divided into three areas of difficulty: sentence structure, vocabulary in context, and paragraph organization, as detailed below.

1. Sentence structure The students had to deal with the following:
   - complex noun group
   - nominalization
   - co-ordination
   - subordination
   - participial phrase - present participle
   - participial phrase - past participle
   - prepositional phrase
   - introductory subject
   - definition
- reference
- substitution
- elliptical expression
- sequential signals
- exemplification
- additive
- adversitive
- causal
- conclusion

2. Vocabulary in context. The students were required to determine the meaning of words through context.

3. Paragraph organization. In this area the students were required to deal with
   - topic
   - main idea of the passage and each paragraph
   - implication/inference
   - prediction
   - sequential organization of the paragraphs in the passage

The objective of the test was to diagnose problems in reading and the participants were drawn from M.S students from the demonstration schools mentioned in TABLE A. The area of test was English for academic purposes. The test mode was visual and the time limit one and a half hours. Total achievable marks was set at 50 points. The test answers were multiple choice type and had four alternative answers with only one correct answer and with three distractors. The multiple choice type test was chosen because this enabled checking the validity of the test through
establishing discrimination and difficulty indices. Inappropriate items could be discarded and appropriate items retained. One mark was given for each correct answer and zero for each wrong answer. The first drafted test was submitted to research supervisors to examine its content validity, correctness, clarity and its appropriateness of language for M.6 students. After amendment, it was tried out for its suitability regarding the type of questions in relation to time allowance.

**Administration**

The test to diagnose the text reading ability in relation to understanding sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization which had been revised with certain statistical values was given to selected sample groups following these procedures:

1. The researcher formally contacted and requested each demonstration school affiliated to the Ministry of University Affairs for co-operation in test arrangements.

2. All students were instructed to do the test at the same time. In order to ensure that the test takers understood what they were supposed to do, they were first orally instructed. Then they were allowed to read the instructions and ask any questions before starting the test.

3. The researcher and the English instructors administered the test to the students in the sample groups.

4. All the answer sheets were collected from the
sample groups of the selected schools. The researcher marked all the papers. The marks the students obtain were computerized to find out the text reading ability index.

The Pilot study

The purpose of the pilot study was to make a final decision regarding readability of the passages, and the discrimination power and the suitability of the time allowance.

Subjects

The test was tried out with thirty M.6 students of the Demonstration School of Srinakharinwirot University, Pathumwan who were not included in the sample groups. The students had been studying English for at least 6 years. They were in science and arts programs. The test was administered two weeks before the end of the first semester of the 1991 academic year and comprised three passages with 50 questions, each question having multiple choice answers. The time limit was 2 hours.

Item analysis

An item analysis was made after the marking of the test in order to obtain discrimination and difficulty indices so that inappropriate items could be discarded and appropriate items retained for the main study. The results are shown in TABLE B.
<table>
<thead>
<tr>
<th>Passage I</th>
<th>Passage II</th>
<th>Passage III</th>
</tr>
</thead>
<tbody>
<tr>
<td>(From Grape to Table)</td>
<td>(Latchkey Children)</td>
<td>(Dietary Lessons from Human Evolution)</td>
</tr>
<tr>
<td>Item Difficulty</td>
<td>Discrimination</td>
<td>Item Difficulty</td>
</tr>
<tr>
<td>No. coefficient</td>
<td>coefficient</td>
<td>No. coefficient</td>
</tr>
<tr>
<td>1. .43</td>
<td>.27</td>
<td>1. .07</td>
</tr>
<tr>
<td>2. .23</td>
<td>.26</td>
<td>2. .53</td>
</tr>
<tr>
<td>3. .43</td>
<td>.36</td>
<td>3. .78</td>
</tr>
<tr>
<td>4. .67</td>
<td>.41</td>
<td>4. .47</td>
</tr>
<tr>
<td>5. .33</td>
<td>.31</td>
<td>5. .67</td>
</tr>
<tr>
<td>6. .50</td>
<td>.53</td>
<td>6. .43</td>
</tr>
<tr>
<td>7. .80</td>
<td>.52</td>
<td>7. .47</td>
</tr>
<tr>
<td>8. .37</td>
<td>.31</td>
<td>8. .63</td>
</tr>
<tr>
<td>9. .53</td>
<td>.44</td>
<td>9. .43</td>
</tr>
<tr>
<td>10. .03</td>
<td>.11</td>
<td>10. .47</td>
</tr>
<tr>
<td>11. .80</td>
<td>.43</td>
<td>11. .37</td>
</tr>
<tr>
<td>12. .53</td>
<td>.62</td>
<td>12. .67</td>
</tr>
<tr>
<td>13. .53</td>
<td>.26</td>
<td>13. .37</td>
</tr>
<tr>
<td>14. .80</td>
<td>.43</td>
<td>14. .37</td>
</tr>
<tr>
<td>15. .27</td>
<td>.51</td>
<td>15. .50</td>
</tr>
<tr>
<td>16. .73</td>
<td>.50</td>
<td>16. .80</td>
</tr>
<tr>
<td>17. .80</td>
<td>.38</td>
<td>17. .50</td>
</tr>
<tr>
<td>18. .90</td>
<td>.56</td>
<td>18. .30</td>
</tr>
<tr>
<td>19. .47</td>
<td>.29</td>
<td>19. .23</td>
</tr>
<tr>
<td>20. .60</td>
<td>.52</td>
<td></td>
</tr>
<tr>
<td>21. .93</td>
<td>.61</td>
<td></td>
</tr>
</tbody>
</table>
The items to be rejected were those which had a difficulty coefficient under 0.20 or over 0.80 and/or had a discrimination coefficient under 0.30. Hence, item No. 1, 2, 10, 13, 15, 18, 19, and 21 in passage I, item No. 1, 6, 9, 13, and 19 in passage II and item No. 2 and 3 in passage III were revised by changing some distractors in the multiple choice answers. Some items were also added to make the test more suitable than the former one.

The revised test was tried out again with another sample group also from the Demonstration School of Srinakharinwirot University, Pathumwan but on this occasion with 48 students. The purpose of this second test was to ensure that the revised test paper did not require any further amendment. The test was administered two weeks after the beginning of the second semester of the 1991 academic year and the time limit was one and a half hours. The results of the test are shown in TABLE C.

<table>
<thead>
<tr>
<th>No.</th>
<th>Difficulty Coefficient</th>
<th>Discrimination Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>0.25</td>
<td>0.32</td>
</tr>
<tr>
<td>2.</td>
<td>0.30</td>
<td>0.40</td>
</tr>
<tr>
<td>3.</td>
<td>0.35</td>
<td>0.45</td>
</tr>
<tr>
<td>4.</td>
<td>0.40</td>
<td>0.50</td>
</tr>
<tr>
<td>5.</td>
<td>0.45</td>
<td>0.55</td>
</tr>
<tr>
<td>6.</td>
<td>0.50</td>
<td>0.60</td>
</tr>
<tr>
<td>7.</td>
<td>0.55</td>
<td>0.65</td>
</tr>
<tr>
<td>8.</td>
<td>0.60</td>
<td>0.70</td>
</tr>
<tr>
<td>9.</td>
<td>0.65</td>
<td>0.75</td>
</tr>
<tr>
<td>10.</td>
<td>0.70</td>
<td>0.80</td>
</tr>
<tr>
<td>11.</td>
<td>0.75</td>
<td>0.85</td>
</tr>
<tr>
<td>12.</td>
<td>0.80</td>
<td>0.90</td>
</tr>
<tr>
<td>13.</td>
<td>0.85</td>
<td>0.95</td>
</tr>
<tr>
<td>14.</td>
<td>0.90</td>
<td>1.00</td>
</tr>
</tbody>
</table>

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In accordance with the criteria that any test items should have a difficulty coefficient between 0.20 and 0.80 and/or a discrimination coefficient greater than 0.30, all of them could be included in the main study. Hence item No.1 in Passage I and item No.2 in Passage II were discarded.

In summary the final test instrument for use in the main study consisted of 21 items of Passage I, 19 items of Passage II and 10 items of Passage III. The items under "sentence structure" were the following:

- complex noun group - item No.11 in Passage I
  and item No.12 in Passage II
- nominalization - item No.8 in Passage I and
  item No.3 in Passage III
- co-ordination - item No.9 in Passage I and
  item No.4 in Passage III
- subordination - item No.10 in Passage I
- participial phrase
  - present participle - item No.18 in Passage I
  - participial phrase
  - past participle - item No.5 in Passage III
- prepositional phrase - item No.8 in Passage II
- introductory subject - item No.10 in Passage II
- definition - item No.16 in Passage I
- reference - item No.1 and No.2 in Passage I
- substitution - item No.4 in Passage II
- elliptical expression - item No.19 in Passage I and
  item No.6 in Passage III
- sequential signals - item No.17 and No.20 in Passage I
- exemplification - item No.2 in Passage I and item No.7 in Passage III
- additive - item No.16 in Passage II
- adversative - item No.8 in Passage III
- causal - item No.17 in Passage II
- conclusion - item No.8 in Passage III

The items under "vocabulary in context" were: item No.3, No 4, No.5, No.6, No.7, No.16 in Passage I, item No.1, No.3, No.6, No.9, No.11 in Passage II and item No.1 and No.2 in Passage III.

The items under "paragraph organization" were:
- topic - item No.14 in Passage II
- main idea - item No.12 in Passage I and item No.13, No.15 and No.17 in Passage II
- implication/inference - item No.13, No.14 in Passage I, item No.19 in Passage II and item No.9 in Passage III
- prediction - item No.18 in Passage II and item No.10 Passage III
- sequential organization of the paragraphs in the passage - item No.21 in Passage I
Reliability of the test

In order to determine the reliability of the test used in the pilot study, Kuder-Richardson 20 formula was used. The reliability of this test was 0.85. According to this figure, this test could be used in the main study with confidence.

The main study

The students used in this study were the M.6 students attending classes in the second semester of the 1991 academic year in ten demonstration schools affiliated to the Ministry of University Affairs. One science class and one arts class were selected from each school. The number of the participating students was 496 -- 272 science students and 224 arts students.

Administration

The test in the final run was administered to all subjects three months after the beginning of the second semester of the 1991 academic year. The period of 3 months was chosen as this allowed students to study for a greater part of the academic year before sitting for the test. One and a half hours was allowed for them to complete the test.

The data in terms of scores derived from the test was analyzed and computerized to find out in each item how many students answered correctly or incorrectly in each program as well as overall. The charts and graphs showing areas of problems were completed.
Analysis of data and statistical devices

Since the study was conducted for the various purposes stated, the statistical devices utilized for analysing the data were:

1. Difficulty \((P) = \frac{R_U + R_L}{2f}\)
   
   This was used to analyze the difficulty coefficient of each item of the test.

2. Discrimination \((D) = \frac{R_U - R_L}{N}\)
   
   This was used to analyze the discrimination coefficient of each item of the test.

3. Kuder - Richardson 20 formula
   
   This was used to calculate the reliability of the whole test.

4. t-test and t-pair test
   
   These were used to compare the ability of students in the respective programs.

5. T-Score formula
   
   This was used to find out the students' ability in each part of text reading skills i.e. sentence structure, vocabulary in context and paragraph organization.

6. The percentage of students passing the test
   
   This was used to determine the students' problems and to distinguish the level of student's achievement.

   Categorization of achievement level was based on
   
   70 to 100 = Good
   60 to 69 = Fairly good
   50 to 59 = Average
   Below 50 = Problem area.
Chapter IV
FINDINGS

This chapter presents the findings of the study which are based on the result of the test concerning text reading skills. The objective of the test was to diagnose problems in reading relating to understanding sentence structure, cohesion, discourse connection, vocabulary in context, and paragraph organization of the students at M.6 level in the demonstration schools affiliated to the Ministry of University Affairs in Thailand.

In accordance with the purpose of the study as stated in Chapter I, these findings are presented in the following order:

1. Determination of the problems in relation to text reading skills including understanding sentence structure, cohesion, discourse connection, vocabulary in context, and paragraph organization under each category of language proficiency mentioned in Chapter I (Definition of terms) of overall students at M.6 level in the demonstration schools mentioned above.

2. Investigation of the problems of and the relationship between the reading ability under each category of language proficiency mentioned in chapter I (Definition of terms) of students majoring in science and that of students majoring in arts at the schools mentioned in 1.

3. Investigation of the problems of and the relationship between the reading ability under each category of language proficiency mentioned in chapter I (Definition of
terms) of students in Bangkok and in the provinces at the schools mentioned in 1.

Finding One

Determination of the problems

A test paper comprising three passages to determine text reading skills including understanding sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization was administered to the participating students. The percentage of the participating students passing in each paper was then combined and where there were two or more similar questions in any given category the average number of the participating students passing was taken. To determine the problems of text reading skills of the overall students, language proficiency was divided into three areas of difficulty: sentence structure, vocabulary in context, and paragraph organization. TABLE 1.1 to 1.3 and GRAPH 1.1 to 1.2 show the overall percentage of participating students passing in reading test according to each category of three areas of difficulty mentioned above. Table 1.4 shows a comparison of the results of text reading skills under sentence structure, vocabulary in context and paragraph organization by T-Score formula.
Students As a Whole

Sentence Structure

As can be seen in TABLE 1.1, under "sentence structure" good achievement was made in "definition" (84.80%) and "participial phrase-present participle" (73.20%). Fairly good achievement was made in "additive" (62.30%). The remaining categories fell away sharply, the poorest achievement was "co-ordination" (39.60%).

TABLE 1.1

<table>
<thead>
<tr>
<th>Sentence Structure</th>
<th>Percentage of students passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>complex noun group</td>
<td>45.60</td>
<td>0.913</td>
<td>0.751</td>
</tr>
<tr>
<td>nominalization</td>
<td>57.10</td>
<td>1.157</td>
<td>0.716</td>
</tr>
<tr>
<td>co-ordination</td>
<td>39.60</td>
<td>0.788</td>
<td>0.686</td>
</tr>
<tr>
<td>subordination</td>
<td>53.80</td>
<td>0.538</td>
<td>0.503</td>
</tr>
<tr>
<td>participial phrase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-present participle</td>
<td>73.20</td>
<td>0.732</td>
<td>0.442</td>
</tr>
<tr>
<td>participial phrase</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-past participle</td>
<td>48.60</td>
<td>0.486</td>
<td>0.501</td>
</tr>
<tr>
<td>prepositional phrase</td>
<td></td>
<td>0.413</td>
<td>0.493</td>
</tr>
<tr>
<td>introductory subject</td>
<td></td>
<td>0.444</td>
<td>0.500</td>
</tr>
<tr>
<td>definition</td>
<td>84.80</td>
<td>0.846</td>
<td>0.500</td>
</tr>
<tr>
<td>reference</td>
<td>57.30</td>
<td>1.145</td>
<td>0.572</td>
</tr>
<tr>
<td>substitution</td>
<td>45.20</td>
<td>0.452</td>
<td>0.500</td>
</tr>
<tr>
<td>elliptical expression</td>
<td></td>
<td>0.663</td>
<td>0.731</td>
</tr>
<tr>
<td>sequential signals</td>
<td>49.40</td>
<td>0.988</td>
<td>0.763</td>
</tr>
<tr>
<td>exemplification</td>
<td>53.80</td>
<td>1.078</td>
<td>0.690</td>
</tr>
<tr>
<td>additive</td>
<td>62.30</td>
<td>0.623</td>
<td>0.490</td>
</tr>
<tr>
<td>adversative</td>
<td>32.80</td>
<td>0.528</td>
<td>0.501</td>
</tr>
<tr>
<td>causal</td>
<td>53.00</td>
<td>0.530</td>
<td>0.501</td>
</tr>
<tr>
<td>conclusion</td>
<td>47.60</td>
<td>0.476</td>
<td>0.501</td>
</tr>
</tbody>
</table>
The areas showing problems were "sequential signals" (49.40%), "participial phrase-past participle" (48.60%), "conclusion" (47.60%), "complex noun group" (45.60%), "substitution" (45.20%), "introductory subject" (44.40%), "elliptical expression" (42.80%), "prepositional phrase" (41.30%), and "co-ordination" (39.60%). (See also GRAPH 1.1 - Sentence Structure)

GRAPH 1.1
Illustration of Achievement in Text Reading Skills of the Overall Students Presented According to Sentence Structure
Vocabulary in Context

According to the result in TABLE 1.2, under "vocabulary in context" the percentage of students passing the test was 46.30 and therefore this result indicates a problem area.

**TABLE 1.2**

Percentage of Students Passing in Reading Test of The Overall Students Presented According to Vocabulary in Context

<table>
<thead>
<tr>
<th>Text Reading Skills</th>
<th>Percentage of students passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>vocabulary in context</td>
<td>46.30</td>
<td>6.014</td>
<td>2.648</td>
</tr>
</tbody>
</table>

Paragraph Organization

Under "paragraph organization" as can be seen in TABLE 1.3 the highest achievement was in "sequential organization of the paragraphs in the passage" (72.10%)

"Main idea" (52.40%) and "implication/inference" (51.95%) showed average results.

There were two problem areas: "prediction" (36.70%) and "topic" (36.50%) (See also GRAPH 1.2 -Paragraph Organization)
### TABLE 1.3
Percentage of Students Passing in Reading Test of The Overall Students Presented According to Paragraph Organization

<table>
<thead>
<tr>
<th>Paragraph Organization</th>
<th>Percentage of students passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>topic</td>
<td>36.50</td>
<td>0.365</td>
<td>0.482</td>
</tr>
<tr>
<td>main idea</td>
<td>52.40</td>
<td>2.107</td>
<td>1.119</td>
</tr>
<tr>
<td>implication/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>inference</td>
<td>51.95</td>
<td>2.0007</td>
<td>1.015</td>
</tr>
<tr>
<td>prediction</td>
<td>36.70</td>
<td>0.738</td>
<td>0.738</td>
</tr>
<tr>
<td>sequential -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>organization of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the paragraphs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in the passage</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GRAPH 1.2**
Illustration of Achievement in Text Reading Skills of the Overall Students Presented According to Paragraph Organization
The number in each category of each area of text reading skills i.e. "sentence structure", "vocabulary in context", and "paragraph organization" varied and this differentiated the scores. To bring these three parts of text reading skills on to the same level of standard score for purpose of more accurate comparison to see the students' ability in each area, the students' scores were computerized using the T-Score formula. The results are shown in TABLE 1.4 which gives the total results for all the students i.e. science and arts, Bangkok students and students in the provinces.

**TABLE 1.4**

A Comparison of The Results of Text Reading Skills under Sentence Structure, Vocabulary in Context, and Paragraph Organization by T-Score Formula

<table>
<thead>
<tr>
<th>Area</th>
<th>T-Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>sentence structure</td>
<td>50.00</td>
<td>9.90</td>
</tr>
<tr>
<td>vocabulary in context</td>
<td>50.00</td>
<td>9.90</td>
</tr>
<tr>
<td>paragraph organization</td>
<td>50.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

It will be seen that according to the results in TABLE 1.4 overall student achievement of T-Score worked out at 50.00 for each of the three areas which indicates that the students' ability is at average level.
Finding Two

Investigation of the problems of and the relationship between Science and Arts students both in Bangkok and in the provinces.

Finding Two gives details in narrative and chart form of the test results for text reading skills of science and arts students both in Bangkok and in the provinces under each category of sentence structure, vocabulary in context, and paragraph organization. The results are shown viz science and arts students and also in a comparison form in TABLE 2.1 to 2.5 and GRAPH 2.1-2.6.

Science Versus Arts Students

Sentence Structure

Science Students

Under "sentence structure" as can be seen in TABLE 2.1 achievement was good in "definition" (89.70%) and "participial phrase-present participle" (73.20%).

"Nominalization" (65.10%), "additive" (63.20%), and "causal" (62.10%) showed fairly good results.

Average results appeared in "subordination" (56.30%) "participial phrase - past participle" (55.10%), "reference" (56.40%), "substitution" (51.50%), "sequential signals" (53.20%) "exemplification" (57.00%), and "adversitive" (55.10%)
Problem areas were "conclusion" (49.60%), "elliptical expression" (46.90%), "complex noun group", (46.70%), "prepositional phrase" (44.50%), "introductory subject" (44.10%) and "co-ordination" (37.30%). "Co-ordination" was particularly problem ridden. (See also GRAPH 2.1)
The results from TABLE 2.1 illustrate that under "sentence structure" achievement was good in "definition" (79.90%) and "participial phrase - present participle" (73.20%).

"Additive" (61.20%) showed fairly good results.

Average results were achieved in "subordination" (51.30%), "reference" (58.30%), "exemplification" (50.10%) and "adversive" (50.00%).

Problem areas were "nominalization" (49.10%), "conclusion" (45.10%), "sequential signals" (44.90%), "introductory subject" (44.60%), "complex noun group" (44.40%) "causal" (43.80%), "co-ordination" (42.00%) "participial phrase-past participle" (42.00%), "substitution" (38.80%), "elliptical expression" (38.60%), "prepositional phrase" (37.50%). The last three named were most marked problem areas. (See also GRAPH 2.2)
GRAPH 2.2
Illustration of Achievement in Text Reading Skills
Arts Students - Sentence Structure

Percentage of Students Passing the Test

- Prepositional Phrase
- Elliptical expression
- Substitution
- Coordination
- Participial phrase
- Past participle
- Object
- Complex noun group
- Indirect subject
- Sequential signal
- Conjunction
- Nominalization
- Adjective
- Exemplification
- Subordination
- Reference
- Subordinate
- Participial phrase - present participle
- Alliteration

= Problem area
<table>
<thead>
<tr>
<th>Sentence Structure</th>
<th>Group</th>
<th>Percentage of Ss. passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-Value</th>
<th>2-tailed probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex non-group</td>
<td>Science</td>
<td>46.70</td>
<td>0.934</td>
<td>0.751</td>
<td>0.67</td>
<td>0.503</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>44.40</td>
<td>0.888</td>
<td>0.752</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominalization</td>
<td>Science</td>
<td>61.10</td>
<td>1.302</td>
<td>0.692</td>
<td>5.06</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>49.10</td>
<td>0.982</td>
<td>0.702</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordination</td>
<td>Science</td>
<td>37.30</td>
<td>0.716</td>
<td>0.67</td>
<td>-1.50</td>
<td>0.133</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>42.00</td>
<td>0.939</td>
<td>0.703</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subordination</td>
<td>Science</td>
<td>56.30</td>
<td>0.563</td>
<td>0.491</td>
<td>0.99</td>
<td>0.322</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>51.30</td>
<td>0.513</td>
<td>0.501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participial phrase-present participle</td>
<td>Science</td>
<td>73.20</td>
<td>0.732</td>
<td>0.444</td>
<td>-0.01</td>
<td>0.990</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>73.20</td>
<td>0.732</td>
<td>0.444</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participial phrase-past participle</td>
<td>Science</td>
<td>55.10</td>
<td>0.551</td>
<td>0.498</td>
<td>2.94</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>42.00</td>
<td>0.419</td>
<td>0.495</td>
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<td></td>
</tr>
<tr>
<td>Prepositional phrase</td>
<td>Science</td>
<td>44.50</td>
<td>0.445</td>
<td>0.495</td>
<td>1.57</td>
<td>0.116</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>37.50</td>
<td>0.370</td>
<td>0.485</td>
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<td></td>
</tr>
<tr>
<td>Introductory subject</td>
<td>Science</td>
<td>44.10</td>
<td>0.441</td>
<td>0.497</td>
<td>-1.2</td>
<td>0.997</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>44.60</td>
<td>0.446</td>
<td>0.498</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definition</td>
<td>Science</td>
<td>89.70</td>
<td>0.397</td>
<td>0.304</td>
<td>3.09</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>79.90</td>
<td>0.300</td>
<td>0.402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>Science</td>
<td>56.40</td>
<td>1.129</td>
<td>0.683</td>
<td>-0.6</td>
<td>0.548</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>58.30</td>
<td>1.165</td>
<td>0.659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sentence Structure</td>
<td>Group</td>
<td>Percentage of Sts. passing the test</td>
<td>Mean Score</td>
<td>S.D.</td>
<td>t-Value</td>
<td>2-tail# probability</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------</td>
<td>-------------------------------------</td>
<td>------------</td>
<td>-------</td>
<td>----------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>51.50</td>
<td>0.515</td>
<td>0.501</td>
<td>2.83</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>38.80</td>
<td>0.388</td>
<td>0.488</td>
<td></td>
<td></td>
</tr>
<tr>
<td>elliptical expression</td>
<td>Science</td>
<td>46.90</td>
<td>0.938</td>
<td>0.739</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>38.60</td>
<td>0.772</td>
<td>0.713</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sequential signals</td>
<td>Science</td>
<td>53.20</td>
<td>1.063</td>
<td>0.778</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>44.90</td>
<td>0.897</td>
<td>0.736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>exemplification</td>
<td>Science</td>
<td>57.00</td>
<td>1.139</td>
<td>0.694</td>
<td></td>
<td>2.18</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>50.10</td>
<td>1.004</td>
<td>0.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>additive</td>
<td>Science</td>
<td>63.20</td>
<td>0.32</td>
<td>0.483</td>
<td></td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>61.20</td>
<td>0.612</td>
<td>0.488</td>
<td></td>
<td></td>
</tr>
<tr>
<td>adversive</td>
<td>Science</td>
<td>55.10</td>
<td>0.551</td>
<td>0.498</td>
<td></td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>50.00</td>
<td>0.500</td>
<td>0.501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>causal</td>
<td>Science</td>
<td>62.10</td>
<td>0.621</td>
<td>0.466</td>
<td></td>
<td>4.15</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>43.80</td>
<td>0.438</td>
<td>0.497</td>
<td></td>
<td></td>
</tr>
<tr>
<td>conclusion</td>
<td>Science</td>
<td>49.60</td>
<td>0.496</td>
<td>0.501</td>
<td></td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>45.10</td>
<td>0.451</td>
<td>0.489</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* P < 0.025
A Comparison between Science and Arts Students

The results from TABLE 2.1 show that under "sentence structure" both science and arts students achieved good results in "definition" and "participial phrase - present participle".

Arts students had 11 problem areas against 6 in science students. Common problem areas were "complex noun group", "co-ordination", "prepositional phrase", "introductory subject", "elliptical expression", and "conclusion".

In TABLE 2.1 the column "2-tail probability" confirms the significant differences between the two groups. There were significant differences in science and arts achievements in the following areas: "nominalization", "participial phrase - past participle", "definition", "substitution", "causal", "elliptical expression" and "sequential signals". (GRAPH 2.3 illustrates the foregoing.)
GRAPH 2.3
Illustration of Achievement in Text Reading Skills between Science and Arts Students
Sentence Structure
Vocabulary in Context

As can be seen in TABLE 2.2, the achievement of science and arts students was very close and indicated a problem area and there was no significant difference between the two groups.

TABLE 2.2
Results of Test for Text Reading Skills
Science and Arts Students in Bangkok and in the Provinces

<table>
<thead>
<tr>
<th>Vocabulary in Context</th>
<th>Group</th>
<th>Percentage of Sts. passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-Value</th>
<th>2-tail probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>47.70</td>
<td>6.21</td>
<td>2.60</td>
<td>1.85</td>
<td>.065</td>
<td></td>
</tr>
<tr>
<td>Arts</td>
<td>44.40</td>
<td>5.77</td>
<td>2.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ 0.025
Paragraph Organization
Science Students

The result from TABLE 2.3 shows that a good result was achieved in "sequential organization of the paragraphs in the passage" (77.20%). "Implication/ inference" (56.15%), and "main idea" (55.60%) showed average achievement. Problem areas were "prediction" (41.80%) and "topic" (36.40%) (See also GRAPH 2.4)

GRAPH 2.4
Illustration of Achievement in Text Reading Skills
Science Students
Paragraph Organization
Arts Students

From TABLE 2.3, it can be seen that a fairly good result was achieved in "sequential organization of the paragraphs in the passage" (67.00%). All other categories proved to be problem areas, especially "prediction" (31.50%) (see also GRAPH 2.5).
### TABLE 2.3
Results of Test for Text Reading Skills
Science and Arts Students in Bangkok and in the Provinces

**Paragraph Organization**

<table>
<thead>
<tr>
<th>Text Reading Skills</th>
<th>Group</th>
<th>Percentage of Sts. passing the test</th>
<th>Mean score</th>
<th>S.D</th>
<th>t-Value</th>
<th>2-tail probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>topic</td>
<td>Science</td>
<td>36.40</td>
<td>0.364</td>
<td>0.482</td>
<td>-0.05</td>
<td>0.962</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>36.60</td>
<td>0.366</td>
<td>0.483</td>
<td></td>
<td></td>
</tr>
<tr>
<td>main idea</td>
<td>Science</td>
<td>55.60</td>
<td>2.224</td>
<td>1.099</td>
<td>2.59</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>49.10</td>
<td>1.967</td>
<td>1.128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>implication/inference</td>
<td>Science</td>
<td>56.15</td>
<td>2.256</td>
<td>1.107</td>
<td>2.78</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>47.35</td>
<td>1.875</td>
<td>1.022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prediction</td>
<td>Science</td>
<td>41.80</td>
<td>0.833</td>
<td>0.743</td>
<td>3.24</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>31.50</td>
<td>0.621</td>
<td>0.717</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sequential organization of the paragraphs in the passage</td>
<td>Science</td>
<td>77.20</td>
<td>0.772</td>
<td>0.420</td>
<td>2.56</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>67.00</td>
<td>0.670</td>
<td>0.471</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p ≤ 0.025
A Comparison between Science and Art Students

From TABLE 2.3 under "paragraph organization" it is illustrated that in "main idea", "sequential organization of the paragraphs in the passage" "prediction" and "implication/inference" there were significant differences between achievements of the two groups.

Science students had 2 problem areas and Arts 4.

Common problem areas were "topic" and "prediction" (GRAPH 2.6 illustrates the foregoing.)
To establish the achievement of standard scores of the students in each area of text reading skills i.e. "sentence structure", "vocabulary in context", and "paragraph organization", the students' scores were computerized using T-Score formula. The results are shown in TABLE 2.4.

<table>
<thead>
<tr>
<th>Group</th>
<th>Area</th>
<th>T-Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>sentence structure</td>
<td>50.01</td>
<td>9.99</td>
</tr>
<tr>
<td></td>
<td>vocabulary in context</td>
<td>50.00</td>
<td>9.96</td>
</tr>
<tr>
<td></td>
<td>paragraph organization</td>
<td>50.00</td>
<td>9.97</td>
</tr>
<tr>
<td>Arts</td>
<td>sentence structure</td>
<td>49.90</td>
<td>9.99</td>
</tr>
<tr>
<td></td>
<td>vocabulary in context</td>
<td>50.00</td>
<td>9.99</td>
</tr>
<tr>
<td></td>
<td>paragraph organization</td>
<td>50.00</td>
<td>9.99</td>
</tr>
</tbody>
</table>

As can be seen in TABLE 2.4, the achievement in "sentence structure", "vocabulary in context", and "paragraph organization" of science students worked out at 50.00. This indicates that the students' ability is at average level. The achievement in "vocabulary in context" (50.00), and "paragraph organization" (50.00) of arts students is better than that in "sentence structure" (49.90), albeit the achievement is at average level only.
To compare the achievement between science and arts students in each area of text reading skills the students' scores were computerized using t-test formula. The results are shown in TABLE 2.5.

**TABLE 2.5**

A Comparison of Achievement between Science and Arts Students in the Areas of Text Reading Skills

<table>
<thead>
<tr>
<th>Area</th>
<th>Group</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-value</th>
<th>2-tail* probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>sentence structure</td>
<td>Science</td>
<td>13.69</td>
<td>4.49</td>
<td>3.70</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>12.23</td>
<td>4.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vocabulary in context</td>
<td>Science</td>
<td>6.21</td>
<td>2.60</td>
<td>1.85</td>
<td>0.070</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>5.77</td>
<td>2.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>paragraph organization</td>
<td>Science</td>
<td>6.44</td>
<td>2.62</td>
<td>3.98</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>5.51</td>
<td>2.55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.025

From TABLE 2.5, it can be seen that in "sentence structure" and "paragraph organization" the mean score gained by both science and arts students is significantly different at level 0.05, while there is no significant difference at level 0.05 between achievements of the two groups in the area of "vocabulary in context".
Finding Three

Investigation of the problems of and the relationship between overall students in Bangkok and in the provinces

Finding Three gives details in investigation of the problems of and the relationship between overall students in Bangkok and in the provinces under each category of sentence structure, vocabulary in context, and paragraph organization. The results are shown viz Bangkok students and students in the provinces and also in a comparison form in TABLE 3.1 to 3.5 and GRAPH 3.1-3.6

Bangkok students versus Students in the Provinces

Sentence Structure

Bangkok Students

The results from TABLE 3.1 indicate that under "sentence structure" good results were achieved by Bangkok students in "definition" (85.00%) and "participial phrase-present participle" (74.10%).

A fairly good result was achieved in "nominalization" (62.80%).

"Subordination" (59.40%) "additive" (58.60%) "exemplification" (57.60%) "reference" (56.80%) "adversitive" (53.00%)" "participial phrase-past participle" (51.50%), "complex noun group" (50.20%) "causal" (50.00%) and "sequential signals (50.00%) achieved average results.
Problem areas were in "introductory subject" (49.20%), "elliptical expression" (48.30%), "conclusion" (45.90%), "substitution" (45.10%), "prepositional phrase" (43.20%), and "co-ordination" (38.00%), the last named being the most problematical. (see also GRAPH 3.1)
Students in the Provinces

It is obvious from TABLE 3.1 that under "sentence structure" students in the provinces also achieved good results in "definition" (64.80%) and "participial phrase-present participle" (72.20%).

A fairly good result was obtained in "additive" (66.50%), "Reference" (57.90%), "causal" (57.00%), "adversitive" (52.60%), and "nominalization" (52.20%) achieved average results.

Problem areas were "exemplification" (49.80%), "conclusion" (49.60%), "sequential signals" (48.70%), "subordination" (48.30%), "participial phrase - past participle" (46.50%), "substitution" (46.00%), "co-ordination" (41.10%), "complex noun group" (40.50%), "prepositional phrase" (39.10%), "introductory subject" (38.70%), and "elliptical expression" (37.20%) (See also GRAPH 3.2)

GRAPH 3.2
Illustration of Achievement in Text Reading Skills
Students in the Provinces
Sentence Structure
### TABLE 3.1
Results of Test for Text Reading Skills
Bangkok Students and Students in the Provinces
Sentence Structure

<table>
<thead>
<tr>
<th>Sentence Structure</th>
<th>Group</th>
<th>Percentage of Sts. passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-Value</th>
<th>2-tail* probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>complex noun group</td>
<td>Bangkok</td>
<td>50.20</td>
<td>1.004</td>
<td>0.765</td>
<td>2.91</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>40.50</td>
<td>0.809</td>
<td>0.723</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nominalization</td>
<td>Bangkok</td>
<td>62.80</td>
<td>1.256</td>
<td>0.729</td>
<td>3.32</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>52.20</td>
<td>1.044</td>
<td>0.672</td>
<td></td>
<td></td>
</tr>
<tr>
<td>co-ordination</td>
<td>Bangkok</td>
<td>38.00</td>
<td>0.759</td>
<td>0.697</td>
<td>-1.01</td>
<td>0.313</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>41.10</td>
<td>0.822</td>
<td>0.673</td>
<td></td>
<td></td>
</tr>
<tr>
<td>subordination</td>
<td>Bangkok</td>
<td>59.40</td>
<td>0.594</td>
<td>0.492</td>
<td>2.49</td>
<td>0.013</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>48.30</td>
<td>0.483</td>
<td>0.501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>participial phrase-present participle</td>
<td>Bangkok</td>
<td>74.10</td>
<td>0.741</td>
<td>0.439</td>
<td>0.47</td>
<td>0.637</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>72.20</td>
<td>0.722</td>
<td>0.449</td>
<td></td>
<td></td>
</tr>
<tr>
<td>participial phrase-past participle</td>
<td>Bangkok</td>
<td>51.50</td>
<td>0.515</td>
<td>0.501</td>
<td>1.11</td>
<td>0.269</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>46.50</td>
<td>0.465</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prepositional phrase</td>
<td>Bangkok</td>
<td>43.20</td>
<td>0.432</td>
<td>0.496</td>
<td>0.92</td>
<td>0.356</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>39.10</td>
<td>0.391</td>
<td>0.489</td>
<td></td>
<td></td>
</tr>
<tr>
<td>introductory subject</td>
<td>Bangkok</td>
<td>49.20</td>
<td>0.492</td>
<td>0.501</td>
<td>2.37</td>
<td>0.018</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>38.70</td>
<td>0.387</td>
<td>0.488</td>
<td></td>
<td></td>
</tr>
<tr>
<td>definition</td>
<td>Bangkok</td>
<td>85.00</td>
<td>0.950</td>
<td>0.351</td>
<td>0.29</td>
<td>0.771</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>84.80</td>
<td>0.848</td>
<td>0.360</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reference</td>
<td>Bangkok</td>
<td>56.80</td>
<td>1.135</td>
<td>0.620</td>
<td>-0.35</td>
<td>0.727</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>57.90</td>
<td>1.157</td>
<td>0.675</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 3.1 (Cont.)
Results of Test for Text Reading Skills
Bangkok Students and Students in the Provinces

<table>
<thead>
<tr>
<th>Sentence Structure</th>
<th>Group</th>
<th>Percentage of Sts. passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-Value</th>
<th>2-tail* probabiliti</th>
</tr>
</thead>
<tbody>
<tr>
<td>substitution</td>
<td>Bangkok</td>
<td>45.10</td>
<td>0.451</td>
<td>0.499</td>
<td>-0.31</td>
<td>0.754</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>46.00</td>
<td>0.460</td>
<td>0.500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>elliptical</td>
<td>Bangkok</td>
<td>48.70</td>
<td>0.956</td>
<td>0.764</td>
<td>3.42</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>37.20</td>
<td>0.744</td>
<td>0.673</td>
<td></td>
<td></td>
</tr>
<tr>
<td>expression</td>
<td>Bangkok</td>
<td>50.00</td>
<td>1.000</td>
<td>0.762</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>48.70</td>
<td>0.974</td>
<td>0.765</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sequential</td>
<td>Bangkok</td>
<td>57.50</td>
<td>1.150</td>
<td>0.678</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>49.80</td>
<td>0.995</td>
<td>0.696</td>
<td>2.50</td>
<td>0.013</td>
</tr>
<tr>
<td>exemplification</td>
<td>Bangkok</td>
<td>58.60</td>
<td>0.586</td>
<td>0.493</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>66.50</td>
<td>0.665</td>
<td>0.473</td>
<td>-1.31</td>
<td>0.071</td>
</tr>
<tr>
<td>additive</td>
<td>Bangkok</td>
<td>52.60</td>
<td>0.530</td>
<td>0.500</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>52.60</td>
<td>0.526</td>
<td>0.500</td>
<td>0.09</td>
<td>0.929</td>
</tr>
<tr>
<td>adverstive</td>
<td>Bangkok</td>
<td>50.00</td>
<td>0.500</td>
<td>0.501</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>57.00</td>
<td>0.570</td>
<td>0.496</td>
<td>-1.30</td>
<td>0.195</td>
</tr>
<tr>
<td>causal</td>
<td>Bangkok</td>
<td>45.90</td>
<td>0.459</td>
<td>0.499</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>49.60</td>
<td>0.496</td>
<td>0.501</td>
<td>-0.82</td>
<td>0.412</td>
</tr>
</tbody>
</table>

* p < 0.025

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A Comparison between Bangkok students and Students in the Provinces

Sentence Structure

According to TABLE 3.1 both Bangkok students and students in the provinces showed best achievement in "definition" and "participial phrase - present participle"

Bangkok students had 6 problem areas, against 11 in the provinces. Common problem areas were "co-ordination" "prepositional phrase", "introductory subject", "substitution", "elliptical expression", and "conclusion".

In "complex noun group", "nominalization", "subordination" "introductory subject", "elliptical expression" and "exemplification", there were significant differences in achievement. (Graph 3.3 illustrates the foregoing.)
GRAPH 3.3
Comparison of Achievement in Text Reading Skills Between
Bangkok Students and Students in the Provinces

Sentence Structure

Percentage of Students Passing the Test

[Bar chart showing comparison of achievement in text reading skills between Bangkok and provinces students for various sentence structures]
Vocabulary in Context

As illustrated in TABLE 3.2, under "vocabulary in context" both groups achieved below average results making this a problem area and there is no significant difference between the two groups.

TABLE 3.2
Results of Test for Text Reading Skills
Bangkok students and Students in the Provinces

<table>
<thead>
<tr>
<th>Vocabulary in Context</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Text Reading Skills</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Vocabulary Group</th>
<th>Percentage of Sts. passing the test</th>
<th>Means</th>
<th>S.D.</th>
<th>t-value</th>
<th>2-tail* probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok</td>
<td>48.30</td>
<td>6.278</td>
<td>2.723</td>
<td>1.92</td>
<td>0.052</td>
</tr>
<tr>
<td>Provinces</td>
<td>43.90</td>
<td>5.709</td>
<td>2.531</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* P < 0.025
Paragraph Organization

Bangkok Students

In "paragraph organization" the results from TABLE 3.3 indicate that Bangkok students obtained a good result in "sequential organization of the paragraphs in the passage" (76.20%). "Main idea" (57.50%) and "implication/inference" (85.10%) obtained average result.

The problem areas were in "topic" (42.90%), and "prediction" (43.10%) (see also GRAPH 3.4)

GRAPH 3.4
Illustration of Achievement in Text Reading Skills
Bangkok Students
Paragraph Organization
Students in the Provinces

According to the information from TABLE 3.3 it can be seen that students in the provinces also showed best results in "sequential organization of the paragraphs in the passage" (69.60%).

Problem areas were "implication/inference" (48.85%), "main idea" (47.10%), "prediction" (29.80%) and "topic" (29.10%). (see also GRAPH 3.5)

GRAPH 3.5
Illustration of Achievement in Text Reading Skills
Students in the Provinces
Paragraph Organization
### TABLE 3.3
Results of Test for Text Reading Skills
Bangkok Students and Students in the Provinces
Paragraph organization

<table>
<thead>
<tr>
<th>Paragraph Organization</th>
<th>Group</th>
<th>Percentage of Sts. passing the test</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-value</th>
<th>2-tail probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bangkok</td>
<td>42.90</td>
<td>0.429</td>
<td>0.496</td>
<td>3.19</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>29.10</td>
<td>0.291</td>
<td>0.455</td>
<td></td>
<td></td>
</tr>
<tr>
<td>topic</td>
<td>Bangkok</td>
<td>57.50</td>
<td>2.300</td>
<td>1.139</td>
<td>4.22</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>47.10</td>
<td>1.882</td>
<td>1.053</td>
<td></td>
<td></td>
</tr>
<tr>
<td>main idea</td>
<td>Bangkok</td>
<td>55.10</td>
<td>2.220</td>
<td>1.125</td>
<td>2.49</td>
<td>0.009</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>48.85</td>
<td>1.908</td>
<td>1.092</td>
<td></td>
<td></td>
</tr>
<tr>
<td>implication/inference</td>
<td>Bangkok</td>
<td>55.10</td>
<td>2.220</td>
<td>1.125</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>48.85</td>
<td>1.908</td>
<td>1.092</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prediction</td>
<td>Bangkok</td>
<td>43.10</td>
<td>0.860</td>
<td>0.742</td>
<td>4.05</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>29.80</td>
<td>0.595</td>
<td>0.710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sequential organization of the paragraphs in the passage</td>
<td>Bangkok</td>
<td>75.20</td>
<td>0.752</td>
<td>0.433</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>69.60</td>
<td>0.696</td>
<td>0.461</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.025
A Comparison between Bangkok Students and Students in the Provinces

The results from TABLE 3.3 illustrate that both groups showed highest achievement in "sequential organization of the paragraphs in the passage".

Bangkok students had 2 problem areas against 4 in the provinces. Common problem areas were "topic", "implication/inference" and "prediction".

There were significant differences between the achievements of the two groups in "topic", "main idea", "implication/inference", and "prediction". (GRAPH 3.6 illustrates the foregoing.)
To establish the achievement of standard scores of Bangkok students and students in the provinces in each area of text reading skills i.e. "sentence structure", "vocabulary in context", and "paragraph organization", the students' scores were computerized using T-Score formula. The achievement of the students is illustrated in TABLE 3.4.

**TABLE 3.4.**
A Comparison of Achievement by Areas of Text Reading Skills
Based on Bangkok Students and Students in the Provinces

<table>
<thead>
<tr>
<th>Group</th>
<th>Area</th>
<th>T-Score</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangkok</td>
<td>sentence structure</td>
<td>50.00</td>
<td>9.90</td>
</tr>
<tr>
<td></td>
<td>vocabulary in context</td>
<td>50.04</td>
<td>9.99</td>
</tr>
<tr>
<td></td>
<td>paragraph organization</td>
<td>50.01</td>
<td>9.99</td>
</tr>
<tr>
<td>Provinces</td>
<td>sentence structure</td>
<td>50.00</td>
<td>9.99</td>
</tr>
<tr>
<td></td>
<td>vocabulary in context</td>
<td>50.01</td>
<td>9.99</td>
</tr>
<tr>
<td></td>
<td>paragraph organization</td>
<td>50.00</td>
<td>9.98</td>
</tr>
</tbody>
</table>

It can be seen in TABLE 3.4 that the achievement of the students in Bangkok and in the provinces in the three areas of text reading skills worked out at 50.00. This result indicates that the ability of the two groups is at average level.
To compare the achievement between Bangkok students and students in the provinces in each area of text reading skills, the students' scores were computerized using t-test formula. The results are shown in TABLE 3.5.

**TABLE 3.5.**
A Comparison of Achievement between Bangkok Students and Students in the Provinces in the Areas of Text Reading Skills

<table>
<thead>
<tr>
<th>Area</th>
<th>Group</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>t-value</th>
<th>2-tail* probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>sentence structure</td>
<td>Bangkok</td>
<td>13.44</td>
<td>4.69</td>
<td>2.20</td>
<td>0.028</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>12.56</td>
<td>4.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vocabulary in context</td>
<td>Bangkok</td>
<td>6.28</td>
<td>2.72</td>
<td>2.40</td>
<td>0.017</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>5.71</td>
<td>2.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>paragraph organization</td>
<td>Bangkok</td>
<td>6.54</td>
<td>2.68</td>
<td>4.88</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Provinces</td>
<td>5.42</td>
<td>2.42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < 0.025

From the table, it can be seen clearly that in "sentence structure" the mean score gained by Bangkok students and students in the provinces is not significantly different at level 0.05, while in the area of "vocabulary in context" and "paragraph organization" there is significant difference at level 0.05 between achievements of the two groups.
CHAPTER V

SUMMARY AND INTERPRETATIONS OF FINDINGS,
AND RECOMMENDATIONS FOR FURTHER STUDIES

Chapter Five presents a summary of the study, summary and interpretation of findings, and recommendations for further study.

Summary of the study

This study was undertaken to investigate the problems of M.6 students in English reading skills, given that most of the students who opt for upper secondary education tend to pursue studies at a higher level where English is vital for accomplishing various disciplines. For example, students pursuing their studies at university level need to read textbooks in English because translation into Thai is not often available. Likewise students aiming for vocational training and education need English for a professional purpose - to be able to read and understand English language operation manuals for machinery equipment. It is apparent that these activities require a good command of English. The Ministry of Education recognises this need and the secondary school English curriculum of 1981 and 1990 emphasizes that students practise reading skills for everyday life, higher education and career in accordance with their age and potential. (Ministry of Education 1981:22, Ministry
Notwithstanding the requirement for emphasis on reading skills, recent research shows that the present day method of teaching does not truly help students develop their reading skills (Somthawil Thanasophon 1981:21 and Wisar Jutiwat 1988:41).

As can be seen from the main body of the study, various researchers have expressed various views in this matter from incorrect approach, monotony, lack of motivation, even lack of understanding bow to read and not knowing the correct approach on the part of teachers. Teachers need to develop an awareness of existing problems. (Prapasri Thangbanjerdsuk 1983:61-62, Faculty of Humanities, Srinakharinwirot University, Pathumwan 1985:339)

Subject

A total of 496 students (272 from the science program and 224 from the arts program) were selected at random from ten demonstration schools – 5 in Bangkok and 5 in the provinces affiliated to the Ministry of University Affairs. A list of these schools is given in Chapter III Table A.

Instrument

The instrument employed in this study was a test to diagnose the students' problems in reading authentic text in relation to understanding sentence structure, cohesion, discourse connection, vocabulary in context and paragraph organization. Three passages were selected using as a criterion,
the level of ability of M.6 students according to the Ministry of Education standards (Ministry of Education 1981: 22, Ministry of Education 1990: 100-101). Language proficiency was divided into three areas of difficulty: "sentence structure", "vocabulary in context", and "paragraph organization". The test mode was visual and the time limit one and a half hours. Total achievable marks was set at 50 points. The test answers were of multiple choice type and had four alternative answers with only one correct answer and with three distractors. One mark was given for each correct answer and zero for each wrong answer.

**Data Collection and Analysis of Data**

Student scores were collected and computerized into table form showing student achievement by category under the three headings viz "sentence structure" "vocabulary in context" and "paragraph organization". Results were tabulated separately to show overall student achievement, to compare reading achievement of science and arts students and of Bangkok students and students in the provinces. To determine the students' problems, the percentage of students passing the test was used to distinguish the level of students' achievement. Charts/Graphs showing the area of reading problems of students in the participating schools were drawn. The formulae used in computerizing results were:

1) Difficulty \( (P) = R_H + R_L \)
2) Discrimination \[ D = \frac{R_u - R_l}{N} \]

3) The reliability was determined by Kuder Richardson 20 formula.

4) t-test and t-pair test were used to compare the ability of students in the respective programs.

5) To bring the three areas of text reading skills i.e. "sentence structure", "vocabulary in context", and "paragraph organization" on the same level of standard score for purposes of more accurate comparison, the students' scores were computerized using the T-Score formula

\[ Z = \frac{x - \mu}{\sigma} \]

\[ T = 10Z + 50 \]

Summary of the Findings

This summary of the findings covers three areas: the achievement and problems of the students as a whole i.e. Bangkok and in the provinces, science and arts - the achievement and problems of Bangkok students compared to that of students in the provinces and the achievement and problems of science students compared to arts students. The three areas mentioned are separated into "sentence structure", "vocabulary in context", and "paragraph organization". The findings can be summed up as follows:
1. By using the T-Score formula for all the students i.e. Bangkok and in the provinces, science and arts, it was found that overall students' achievement worked out at 50.00 for each of the three areas. This indicates that students' ability is at average level.

2. By using T-Score formula it was found that the ability of science students in "sentence structure", "vocabulary in context" and "paragraph organization" is at average level. The ability in "vocabulary in context" and "paragraph organization" of arts students was better than that in "sentence structure", albeit the achievement of arts students in these three areas is at average level. There was no significant difference between mean scores gained by science and arts students in "vocabulary in context" but in "sentence structure" and "paragraph organization" there was significant difference between achievements of the two groups.

3. The achievement of T-Score of Bangkok students and students in the provinces worked out at 50.0 for each of the three areas. This indicates that the ability of Bangkok students and students in the provinces is at average level. There was no significant difference between mean scores gained by Bangkok students and students in the provinces in "sentence structure" but in "vocabulary in context" and "paragraph organization" there was significant difference between achievements of the two groups.

By looking at each category of text reading skills it was found that there were common areas of good achievement as well as common problematical areas, and that these common areas
were apparent when comparing both science and arts groups and also Bangkok students and students in the provinces.

Under "sentence structure" the problem areas are:
1. complex noun group (except all students in Bangkok)
2. Nominalization (all arts students)
3. co-ordination
4. subordination (all students in the provinces)
5. participial phrase - past participle
   (all arts students and all students in the provinces)
6. prepositional phrase
7. introductory subject
8. substitution (except all science students)
9. elliptical expression
10. sequential signals
    (except all science students and all Bangkok students)
11. exemplification (all students in the provinces)
12. conclusion
13. causal (all arts students)

Under "vocabulary in context" students' achievement is generally at a low level, therefore it indicates a problem area.

Under "paragraph organization", the problem areas are:
1. topic
2. main idea
   (all arts students and all students in the provinces)
3. implication / inference
   (all arts students and all students in the provinces)
4. prediction
The Interpretations of the Findings

These findings compare favourably with most of the researchers cited in Chapter II; for example Christine Nuttall who contends students fail to understand thoroughly the meaning of texts because they lack the knowledge of sentence structure, especially areas of complex noun groups, nominalization, co-ordination, subordination, participial and prepositional phrases as modifiers. (Christine Nuttall 1987: 85-100)

Bond and Tinker (1957:236) endorse the view that reading skills include understanding of meaning of groups of words, understanding of sub-clauses, the relationship between sub-clauses and understanding of sentences. They also contend the reader must know how to read groups of words in the sentence, relationship between phrases in order to understand well.

Samutr Senchaovaniz (1985:94) states that the reader must be able to understand to the extent of the implication or depth of meaning of the text and thereafter to summarize ideas. Lennon (1961: 29-31) emphasizes skills such as knowledge of location of passages referred to specifically and the ability to follow the text sequentially. Thomas C.Barrette (1965:8-25) stresses the importance of inference as a level to be reached in reading skills without which the student cannot proceed to coping with "evaluation" and "appreciation"

Saowapak Sriwijarn's research (1978:44-48) included a multiple choice paper on English syntax and another cloze type paper for reading comprehension. The study found nominalization to be one of the problems in reading comprehension ability.
Praprasri Thangbanjerdsuk (1983: 60-63) carried out a research with 173 students through a test paper comprising reading for main idea, arranging in sequential order, cause and effect, drawing conclusion and prediction. The result showed problems in all five areas and the present research confirms that these problems still exist with students.

On the subject of selection of test material it will be noted that most researchers advocated authentic text for better results. This is confirmed by the study carried out by Suthira Heathsilpa (1983:43) using students from M.4 level in Prince of Songkla Demonstration School. Both authentic text and text book were used and the former showed significantly higher results. The test paper carried out in this research used authentic text with adaptation of certain passages which were thought to be too difficult for the level of participating students. The greater part of the text was not adapted in any way, yet the results as can be seen from TABLE 1.4, 2.4, 3.4 in chapter IV showed students’ level as only average. This may have been brought about by the students being unfamiliar with the test paper. Material used in English lessons is much adapted.

It may also have been that the students were not able to interpret context clues, roots, prefixes and suffixes. This problem is referred to by Malinee Chantawimon (1991: Preface) where it is stated that teachers should not encourage students to remember the meaning of vocabulary only, rather, the exercise should include allowing the students to guess the answers from context clues, roots, prefixes and suffixes.
The results of the present research indicating only "average" levels also relates to the understanding of English structure and vocabulary in context of ability to read English. Warinee Srisompong (1973: 57-58), Chariya Onprapai (1975: 51-53), and Rarinthip Charoensuk (1975: 62-64) also found that the understanding of English structure and vocabulary were prerequisites to the ability to read English.

**Recommendations**

1. There should be a further study of the problem areas and the inexplicable situation of marked differences in achievement in certain given categories between science and arts students in Bangkok and in the provinces, to find the reason(s) for these problems as they may have implications for the teaching and learning process of reading in English. This study should also undertake to establish whether the set question under "definition" and "sequential organization of the paragraphs in the passage" may have been too easy for the participating students, bearing in mind the rather high difficulty coefficient obtained in these areas as shown in Table C. Thus in these categories there should, perhaps, be more than just one question.

2. A similar exercise to that carried out in this present research should be also carried out in the lower secondary level to test the skills of students there. A comparison can then be made and further conclusions drawn. For example a test carried out at lower secondary level may reveal weaknesses in students'
reading skills at that level which are carried over into the upper secondary level unchecked, perhaps producing a snowballing effect.

3. At present, English reading materials available to students at secondary level do not teach the student how to recognize the various categories of English reading skills viz "sentence structure", "discourse connectors", and "paragraph organization". The current material in use consists only of the passage itself and questions thereon but does not include any introduction or assistance to the method of acquiring the necessary reading skills. Therefore material currently in use should be amended or added to to cover this requirement. Additionally this should be practiced from the beginning levels of reading skills. Together with the practicing of reading skills there should be more time allotted to developing students' oral skills through regular classroom discussions between teacher and students on between student groups / individuals. This will also help students gain confidence in themselves.

4. Student achievement in "vocabulary in context" is generally at a low level. To improve this situation, teachers should put more stress on training students to guess the meaning of words through context, rather than using a dictionary which they may find in later life is not always readily available - perhaps through the use of synonyms, antonyms and definition as context clues.
5. Student levels in comprehension and prediction are also rather low. To improve this situation, test questions should be gauged so as to ensure that the student must answer based upon comprehension rather than based on memorizing the passage on which the questions are formed. This is supported by the research of Ronald White (1981:89).

6. Teaching methods should include encouraging students to be independent readers i.e. to spend some time in out of classroom reading and the key to this is "motivation". However as students are individuals and therefore differ in many respects, also as schools have different approaches, there would be considerable difficulty in providing a general motivation plan for teachers to follow. This must be a matter for each teacher to think about and apply according to local circumstances. Perhaps the Teacher Training Colleges could help by including this in their training courses or perhaps through regular seminars organized at school level or Teacher Training College level.
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Read the following passages carefully and answer the questions by choosing the best alternative for each question from a, b, c or d.

Passage One

From Grape To Table

The subject of wine is a fascinating one to some! To others it may be a bore, and to others something that is quite incomprehensible, and this is a shame—they simply don't know what they are missing. The loving thing about getting to know your wine is to drink it! This most pleasant of pastimes, coupled with a little concentration and intelligent observation, can be repaid with a great deal of enjoyment.

Quite simply wine is the fermented juice of the grape. Fermentation is the conversion, induced by yeast cells, of the grape sugar into alcohol—and there you have wine.

The vines have lain dormant all winter. In early summer they flower and produce grapes which develop until autumn when they are ready to be harvested, and the vintage begins. The harvested grapes are pressed to extract the juice and the 'must'—as the juice is called—then ferments in huge vats for anything from two to fourteen days, depending on the quality of the wine to be produced. Red wines have a longer fermentation period than white wines, as the whole grape is fermented within the juice to extract the full colour, flavour and tannin.

Tannin is an important element in red wine. It enables the juice to be kept for long periods while it matures. There is little tannin in white grapes, so the juice is fermented without the skins and for a shorter period than for red wines.

The 'must' in the vats seethes and bubbles during fermentation, and a close watch has to be maintained on the temperature—a fast, hot fermentation can spoil the wines, making them harsh and coarse. When all activity has ceased, the wines are run from the vats into barrels—leaving behind
the skins and sediment—and are left to settle for several months.

During this period new sediment, which is the accumulation of dead yeast cells, is forming all the time, so periodically the wine is run off into new barrels. This is called 'racking'. The final step in eliminating any cloudiness in the wine after racking, is 'fining'. Natural substances are added to collect any remaining particles and to ensure that the wine is clear and pure. Then it is ready for bottling.

Passage Two

Latchkey Children......Knock, Knock, Is Anybody Home?

In the United States the cost of living has been steadily rising for the past few decades. Because of this mothers have been leaving the traditional role of full-time homemaker and taking full-time jobs outside the home. Mothers leave home in the morning and are not at home when their children return from school. The children must therefore let themselves in and this has given rise to the term ' latchkey children'.

Latchkey children range in age from six to thirteen. On a daily basis they return from school and unlock the door to their home with the key hanging around their necks. They are now on their own, alone, in quiet, empty rooms. For some youngsters, it is a productive period of private time, while for others it is a frightening, lonely void. For reasons of safety, many parents forbid their children to go out to play or to have visitors at home. The youngsters, therefore, feel isolated.

Latchkey children who were interviewed reported diverse reactions. Some latchkey children said that being on their own for a few hours each day fostered, or stimulated, a sense of independence and responsibility. They felt loved and trusted, and this feeling encouraged them to be self-
confident. Latchkey girls, by observing how their mothers coped with the demands of a family and a job, learned the role model of a working mother. Some children stated that they used their unsupervised free time to perfect their athletic skills, such as playing basketball. Others read books or practised a musical instrument. These children looked upon their free time after school as an opportunity for personal development. It led to positive, productive, and valuable experiences.

Conversely, many latchkey children expressed much bitterness, resentment, and anger for being made to live in this fashion. Many claimed that too much responsibility was placed on them at an early age; it was an overwhelming burden. They were little people who really wanted to be protected, encouraged, and cared for through attention from their mothers. Coming home to an empty house was disappointing, lonely, and often frightening. They felt abandoned by their mothers. After all, it seemed to them that most other children had 'normal' families whose mothers were 'around', whereas their own mothers were never home. Many children turned on the television for the whole afternoon day after day, in order to diminish feelings of isolation; furthermore, the voices were comforting. Frequently, they would doze off.

Because of either economic necessity or strong determination for personal fulfillment, or both, the phenomenon of latchkey children is widespread in our society. Whatever the reason, it is a compelling situation with which families must cope. The question to ask is not whether or not mothers should work full-time. Given the reality of the situation, the question to ask is: how can an optimum plan be worked out to deal effectively with the situation?

It is advisable for all members of the family to express their feelings and concerns about the inevitable changes candidly. These remarks should be discussed fully. Many factors must be taken into consideration: the children's personality and maturity, the amount of time the children will be alone, the safety of the neighbourhood,
accessibility of help in case of an emergency. Of supreme importance is the quality of the relationship between parents and children. It is most important that children be secure in the knowledge that they are loved. Feeling loved provides invaluable emotional strength to cope successfully with almost any difficulty that arises in life.

Passage Three

Dietary Lessons From Human Evolution

Most of us have an impression of early man as a successful hunter who went out each day with a club over his shoulder to catch something for supper. Usually, however, early man came back empty-handed because most animals were simply too swift for a man armed with only a club. The real hero of the survival of the human species was not early man but early woman. She spent her days gathering fruits, nuts, seeds, tubers, roots, berries, beans, and grains and made meals for the early human family out of complex carbohydrates—starchy foods—and fresh fruits and vegetables. Feasts of meat were occasional, only when her mate was lucky enough to bag a mole or lizard.

Until recently, archaeological evidence had greatly exaggerated the role of meat in the diets of prehumans and prehistoric humans because animal bones are far better preserved in the rocky fossil record than are softer plant materials. However, in the last decade or so, anthropologists and archaeologists have devised some ingenious techniques that clearly reveal the vegetarian emphasis of our progenitors.

For example, microscopic studies of fossilized teeth from early human ancestors who roamed the earth 4 million years ago indicate that they were primarily fruit eaters. Not until the evolution about 1.5 million years ago of Homo erectus, the immediate ancestors of our species, was there evidence of a mixed diet of plant and animal foods. But even
then, there is reason to believe that animal foods were not the primary fare until quite recently in our evolutionary history. Analyses of fossils of human faeces deposited 300,000 years ago reveal that our human ancestors subsisted primarily on a vegetable diet. Studies of the remains of Stone Age people who inhabited the earth 5,000 years ago show that they consumed seeds, nuts, berries, and roots from hundreds of plant species.

The hunting and eating of mammoths date back only about 300,000 years. Even then, meat was not the central item in the diet. Plants were. Dairy products did not become a significant part of the diet until the domestication of cattle, about 10,000 years ago. Eggs, too, were a rare luxury, obtained only by robbing birds' nests before fowl were domesticated. In short, if the human species had had to depend on large supplies of animal protein for its survival, it would have died out 2 million years ago.
Passage One

From Grape To Table

1. The word "this" in line 3 means______________ .
   a. the idea that the subject of wine is boring
   b. the idea that the subject of wine is simple
   c. the idea that the subject of wine is attractive
   d. the idea that the subject of wine is boring and incomprehensible

2. The word "This" in line 5 refers to______________ .
   a. drinking your wine
   b. observing your wine
   c. concentrating on your wine
   d. getting to know your wine

3. The word "dormant" in line 12 means______________ .
   a. inactive
   b. busy
   c. flowery
   d. dropping the leaves

4. The word "vintage" in line 14 means______________ .
   a. the pressing of the grapes
   b. the process of wine making
   c. the picking of the ripe grapes
   d. the old fashioned method of wine making

5. The word "ceased" in line 30 means______________ .
   a. stopped
   b. occurred
   c. continued
   d. developed

6. The word "accumulation" in line 35 means______________ .
   a. progress
   b. build-up
   c. decrease
   d. reduction

7. The word "eliminating" in line 37 means______________ .
   a. increasing
   b. decreasing
   c. removing
   d. developing
From no. 8-11 choose the best alternative which is closest in meaning to the given sentence.

8. Fermentation is the conversion, induced by yeast cells, of the grape sugar into alcohol.
   a. Wine is made from grape sugar.
   b. Yeast cells change themselves into alcohol.
   c. Grape sugar is produced from yeast cells.
   d. The grape sugar is converted into alcohol by yeast cells.

9. The "must" in the vats seethes and bubbles during fermentation, and a close watch has to be maintained on the temperature.
   a. While the "must" is fermenting, watch the temperature.
   b. Whenever the "must" seethes and bubbles, maintain the temperature.
   c. When the "must" seethes, watch the fermented juice.
   d. The "must" bubbles because the temperature is high.

10. When all activity has ceased, the wines are run from the vats into barrels.
    a. The wines are actively run from vats into barrels.
    b. The activity has ceased after the wines are run into the barrels.
    c. The wines are run from vats into barrels while fermentation is in process.
    d. The wines are run from vats into barrels as soon as the fermentation process is over.

11. During this period new sediment, which is the accumulation of dead yeast cells, is forming all the time.
    a. The new sediment takes place in a certain period of time.
    b. The new sediment produces dead yeast cells.
c. The new sediment is a collective amount of dead yeast cells,.........................
d. The new sediment forms a group of dead yeast cells,......

12. What is the main idea of the passage?
   a. The preparation and bottling of wine
   b. The fermentation of wine
   c. How wine is made
   d. How to select your wine

13. What can we infer from the first paragraph of the passage?
   a. Knowledge of wine is incomprehensible.
   b. It is useless to understand about wine.
   c. It is helpful to be able to select a good wine.
   d. It is useful to acquire knowledge about wine.

14. What is suggested in the first paragraph of the passage?
   a. Lacking in knowledge of wine is a pity.
   b. Wine drinking is a pleasant pastime.
   c. There is a great deal of enjoyment in drinking wine.
   d. It would be more enjoyable to drink wine with understanding of how wine is made.

15. What is the wine?
   a. Pure grape juice
   b. A kind of grape juice
   c. The grape juice processed into alcohol
   d. A fruit juice extracted from grapes
16. What is the must?
   a. It is a kind of red wine in a vat.
   b. It is the fermented grape juice.
   c. It is the skin of grape after pressing.
   d. It is juice extracted from pressed grapes.

17. What is the process right before the wine is put in vats to ferment?
   a. The grapes are harvested.
   b. The grape juice is flavoured.
   c. The grape juice is extracted.
   d. The juice must be kept between two and fourteen days.

18. What makes the quality of wine?
   a. The quality of the grapes
   b. The time used for fermentation
   c. The way the juice is fermented
   d. The amount of juice from the grapes

19. What are left to settle for several months? (line 32-33)
   a. The wines
   b. The must
   c. The skins and sediment
   d. The wines, skins, and sediment

20. What happens to the wine after racking and fining?
   a. The wine is bottled.
   b. The wine is put into barrels.
   c. The wine is ready to drink.
   d. The wine has yeast cells added to it.
21. The steps in production of wine are:________________.

1. pressing  2. fermenting  3. harvesting
4. bottling  5. transferring from vats to barrels
6. fining  7. further fermenting for several months
8. racking

a. 3 1 2 5 7 6 8 4  
b. 3 1 2 5 7 8 6 4

c. 3 1 5 7 2 8 6 4

d. 3 1 5 2 7 6 8 4
Latchkey Children.....Knock, Knock, Is anybody Home?

1. The word "void" in line 14 means_____________.
   a. a lonely day       b. a boring hobby
   c. an empty home     d. a wasted period of time

2. The writer uses "such as " in line 27 to_______.
   a. explain the term "skills"
   b. give the meaning of athletic skills
   c. suggest an example of athletic skills
   d. compare playing basketball to other athletic skills

3. The word "Conversely" in line 32 can be replaced by_______.
   a. Moreover       b. Furthermore
   c. Additionally    d. On the other hand

4. The phrase "to live in this fashion" in line 33-34 means_______.
   a. to live in a frightening home
   b. to live in a lonely situation
   c. to dress in an up-to-date way
   d. to live a bitter, resentful angry life

5. The word "burden" in line 36 means_______.
   a. load       b. job       c. study       d. leisure

6. The word "abandoned" in line 40 means___________.
   a. disappointed       b. encouraged
   c. left them and gone away    d. separated from the family

7. In using "Because of" in line 47 the writer is expressing
   _______________.
   a. reason        b. result    c. contrast     d. condition
8. The phrase "with which families must cope" in line 51 means
   a. the families must understand the situation
   b. the situation forces the families to manage the children
   c. the families must be able to deal with the situation
   d. the situation taught the families to control their children

9. The word "optimum" in line 54 means__________.
   a. simple   b. best   c. alternative   d. standard

10. The word "It" in line 56 refers to__________.
    a. the family feelings
    b. the inevitable changes
    c. the members of the family
    d. the advice to the member of the family

11. The word "accessibility" in line 62 means__________.
    a. knowing that they are in trouble
    b. knowing that help will be available
    c. knowing when their parents are not available for them
    d. knowing where and how to get help when they are in trouble

12. "Latchkey girls by observing how their mothers coped with the
demands of the family and the job, learned the role model of
a working mother". (line 23-25) means__________.
    a. Latchkey girls caused families' problems
    b. Latchkey girls observed their mothers' jobs
    c. Latchkey girls learned the role of a working mother
    d. Latchkey girls trained themselves to do the housework

13. What is the main idea of the passage?
    a. The effect of family income on the latchkey children
    b. The effect of being left alone on the lives of Latchkey children
c. The effect of their mother working on the lives of latchkey children
d. The effect of the relationship between parents and children on the latchkey children

14. What are Latchkey children?
a. The children who get back home from school and unlock the house themselves
b. The children who prefer to be alone when they come home from school
c. The children who lock themselves in their room for most of the time
d. The children who are unwanted by their parents and learn to become independent

15. The main idea of paragraph 3 is that being alone has taught many latchkey children
a. to have valuable experiences
b. to be good at playing basketball
c. to be fond of going to school
d. to be able to do all the housework

16. For what reason did the children turn on the television?
a. To avoid doing their homework
b. To get rid of the feeling of isolation
c. To comfort themselves with the voices
d. A combination of (b) and (c)

17. What is the main idea of paragraph 5?
a. Whether or not mothers work full-time
b. How latchkey children cause problems in society
c. The necessity that families get rid of latchkey children
d. The effective plan to deal effectively in the problem of latchkey children

18. What is possible if this problem is solved?
   a. Children will be less at risk physically and mentally.
   b. Children will be with their parents all the time.
   c. Children will be safe in any cases of emergency.
   d. Children will be competent like their mothers.

19. What is implied in this passage?
   a. Mothers could not work and must give all their time to their children.
   b. Mothers could work and make children feel secure that they are loved.
   c. Mothers could not work part-time and must spend the latter half of the day with their children.
   d. If mothers work full-time they cannot make satisfactory arrangements for their children.
Passage Three

Dietary Lessons From Human Evolution

1. The word "progenitors" in line 20 means___________.
   a. ancestors        b. early women
   c. early human tribes   d. prehistoric humans

2. The word "deposited" in line 29 means___________.
   a. buried          b. dug up
   c. mixed           d. remained

From no. 3-6 choose the best alternative which is closest in meaning to the given sentence.

3. Dairy products did not become a significant part of the diet until the domestication of cattle, about 10,000 years ago.
   a. Cattle produced dairy products 10,000 years ago.
   b. When the cattle became significant, dairy products were produced.
   c. When cattle became dairy products, meat became a large part of the daily food.
   d. When cattle were domesticated, dairy products became a large part of the daily food.

4. She spent her days gathering fruits, nuts, seeds, tubers, roots, berries, beans, and grains and made meals for the early human family out of complex carbohydrates--starchy foods--and fresh fruit and vegetables.
   a. She made meals out of carbohydrates, fresh fruits, and vegetables.
b. While she went out looking for food, she made meals for the family.

c. She made meals for the family before she went out looking for food.

d. She made food for the family from fruit and vegetables which she found every day.

5. Analyses of fossils of human faeces deposited 300,000 years ago reveal that our human ancestors subsisted primarily on a vegetable diet.

a. Fossils of human faeces were deposited 300,000 years ago.

b. Fossils deposited 300,000 years ago have been analysed as human faeces.

c. We know our ancestors were vegetarians from analyses of fossilized human faeces that were deposited 300,000 years ago.

d. Human faeces have become fossilized after being deposited for 300,000 years and this shows that our ancestors were vegetarians.

6. Even then, meat was not the central item in the diet. Plants were.

a. Our ancestors liked to eat plant foods.

b. Plants were considered better than meat as food.

c. Meat and vegetables were half and half in the meal.

d. Vegetables were the main part of a meal, meat was not.

7. The writer uses "For example" in line 21 to__________.

a. define anthropology and archaeology.

b. give evidence of the ingenious techniques

c. describe the immediate ancestors of our species
d. report the result of the "microscopic studies" of fossilized teeth

8. The writer uses "In short" in line 41 to _____________.
   a. introduce a new idea        b. conclude the last paragraph
   c. change the old belief       d. stress the need for "meat"

9. From the passage we can infer that originally early humans were thought that______________.
   a. they ate only meat
   b. they were good animal hunters
   c. they ate mainly vegetables
   d. women were less dominant partners in the family

10. What would happen if human species depended largely on animal protein for their survival?
    a. They would be extinct.
    b. They would have strong teeth.
    c. They would not have planted vegetables.
    d. They would have raised various kinds of animals.
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APPENDIX B
COVERING LETTER
เนื่อง ขอความอนุเคราะห์ในการช่วยท่านยิกความละเอียดในรายงานดังกล่าว

เนื่องจาก  anvการที่เรียนรู้ ทางศึกษานั้น นักศึกษาระดับปริญญาโทหลักการค่าตัวผลประสิทธิภาพวิชาการทางวิชาการ มีการประเมินค่าตัวผลในกลุ่มที่มีศักยภาพในการผลักดันขั้นสุดท้ายของนักเรียนชั้นมัธยมศึกษาปีที่ 6 จำนวน 60 คน โดยแบ่งออกเป็น 2 แผนภูมิ คือ แผนภูมิค่าตัวผลจำนวน 30 คน และแผนภูมิค่าตัวผลในกลุ่มที่มีศักยภาพ จำนวน 30 คน เนื่องดังนั้น ภูมิภาคการ ทำการศึกษาเรื่อง "THE ANALYSIS OF THE PROBLEMS CONCERNING TEXT READING SKILLS OF THE MATHAYOM SUKSA 6 STUDENTS IN THE DEMONSTRATION SCHOOLS AFFILIATED TO THE MINISTRY OF UNIVERSITY AFFAIRS IN THAILAND"

ผลของการทดลองนี้จะเป็นประโยชน์ในการศึกษา เวลาปัจจุบันในกลุ่มที่มีศักยภาพนักเรียนที่มีศักยภาพในการเรียนรู้ ศักยภาพในการผลักดันด้านการศึกษาทั่วไปประเทศ ที่จะเป็นประโยชน์ต่อการจัดกรุณ์และ คุ้มครองในการวางแผนการจัดการเรียนรู้ทางที่มีความต่อไปในอนาคต

ซึ่งเรามีคำขอความอนุเคราะห์ในการช่วยท่านยิกความละเอียดในเรื่องการทดลองและขออนุญาตพิมพ์เป็นอักษรภาษาไทย ขอกรุณา

ขอแสดงความนับถือ

(ลงชื่อพิเศษ หรือชื่อ)
หัวหน้าภาคศึกษาภาษาต่างประเทศ