THESIS

THE EFFECTIVENESS OF THREE PHASE TECHNIQUE IN TEACHING READING COMPREHENSION VIEWED FROM INTELLIGENCE

(An Experiment in the First Year Students of SMPN 5 Nganjuk in the Academic Year of 2008/2009)

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A. Background of the Study

In the globalization era where there is almost no limit between one country to another, the role of English is getting more and more important. It is so because it can be used as a means to communicate with other people around the world with different language backgrounds. A language cannot develop without the members of the community who use it in a society. Language is an instrument of communication among human being in a community. Languages differ from each other in such a way that the members of one speech community usually do not understand the speakers of other speech community, because each country has a language which is different from those of other country in the world.

Language has an important role in developing learners’ intellectual, social, and emotional value and it supports the success in learning all subject matters. Hopefully, studying language will help the learner to recognize themselves, their cultures and other cultures. Besides, learning language can help learners to express their ideas and feeling. It also can help them to participate in society.
In Indonesia, English is the first foreign language taught from elementary school to university. It shows that English has an important role for learner to communicate in their daily life in globalizations era and to develop their communication (Kurikulum, 2004: 384).

Nowadays, the use of English in Indonesia is not only found in the formal education but also in their environments, such as television, electronic media, and printed media. English words can be seen. The preceding facts prove that there are many English words everywhere. Every product, advertising, and food package uses English as their way to introduce their product. Ironically although it has been taught in Indonesia for many years, few students have had good skill of English. English is still regarded as a difficult subject. They do not have a bravery to use English. The bravery to use English is not the only factor that makes English difficult, the other factors is teacher, material, situation on the class, and the environment of the students.

Based on the observation there are some differences between students who live in the village and those who live in the city. Usually students who live in a village do not have self-confidence to use English in their social life. They do not realize that they need English for their lives. It happens because in their environment English is not used. Because of the condition, generally the learners have lack ability in reading.

It is different from students who live in city. In their environments, there are many English words used, that will help to access English word, and make them accustomed to English word. In other words, English is not strange for them. Because of that, they are motivated to read. They feel that they need to use
English because some public areas use English to convey information.

There is an important point related to the observation above, that the students need much knowledge or information to improve their life, so it is important for them to read newspapers, books, and many other things. This is why students are taught reading skill in English at school.

Reading is very important skill to be mastered because by reading, the students will get much information, which is very useful for their life. Widdowson in Urguhart (1982: 22) states that reading is the process of receiving and interpreting information encoded in language through the medium of print. From the explanation, it can be seen that reading has a power to create a better condition. Bloom and Greene in Bernhard (1994: 218) explain “Reading is used to establish structure and maintain social relationship between and among people “Related to a phenomenon reading cannot be separated from the other language skills. Brown supports it by stating ” Reading is treated as one of two or more interrelated skills. A course that deals with reading skills, then will also deal with related listening, speaking, and written skills”.

Besides, reading is essential skill for learners of English as a second language. For most of these learners it is the most important skill to master in order to ensure success not only in learning English, but also in learning any content subjects in where reading is required. In short, with the strengthened reading skill, learners will make greater progress and development in all other areas of learning (Nunan, 2003: 69).
Permendiknas No.22 year 2006 states that the competence standard of reading at the second semester of the first grade at Junior High School is as follows:

**Competence standards (11):** Memahami makna dalam teks tulis fungsional dan essay pendek sangat sederhana yang berbentuk descriptif dan procedure untuk berinteraksi dengan lingkungan terdekat. Basic competence (11.2.) Merespon makna dan langkah retorika secara akurat, lancar, dan berterima dalam essay sangat sederhana yang berkaitan dengan lingkungan terdekat dalam teks berbentuk descriptif dan procedure.

In reality, most of the students face some problems related to reading skill. The students find some more problems in comprehending the text, finding general idea of the text, finding main idea of the text, finding some information explicitly and implicitly stated in the text, find references, and finding the meaning of the words related to the text.

Based on the explanation above, it can be concluded that reading is one of English language skills considered important in our life. We will get some information through reading. The students should read many kinds of printed media if they want to get information and that is why students are taught reading skill in English. English teacher should create a better technique in teaching reading.

Teachers should know that their students have different strengths. In the language-teaching field, some of the differences among students have been attributed to students’ different learning or cognitive styles. For instance, some students are better visual learners than aural learners. They learn better, when they are able to read new material rather than simply listen to it (Larsen-Freeman 2000: 169). Related to work by psychologist, Gardner (1999: 41-44) states that multiple
intelligences have been influential in language teaching circles. Teachers who recognize the multiple intelligences of their students acknowledge that students bring with them specific and unique strengths, which are often not taken into account in classroom situations. Gardner has theorized that individuals have at least seven distinct intelligences that can be developed over lifetime. The seven are: (1) Logical/mathematical-the ability to use numbers effectively, to see abstract patterns, and to reason well; (2) Visual/spatial-the ability to orient oneself in the environment, to create mental images, and sensitivity to shape, size, color; (3) Body/kinesthetic-the ability to use one’s body to express oneself and to solve problems; (4) Musical/rhythmic-an ability to recognize total patterns and a sensitivity to rhythm, pitch, melody.(5)Interpersonal-the ability to understand another person’s moods, feelings, motivation, and intentions; (6)Intrapersonal-the ability to understand oneself and to practice self discipline; and (7)Verbal/linguistic-the ability to use language effectively and creatively. While everyone might possess these seven intelligences, they are not equally developed in anyone individual. Some teachers feel that they need to create activities that draw on all seven, not only to facilitate language acquisition among diverse students, but also to help them realize their full potential with all.

Teacher should always try to improve the way of teaching. The government also improves the way of teaching and learning. It is proved by the changing of curriculum, which is used. The changing of curriculum is aimed at developing the English teaching to the learners. In curriculum 2004, the aim of English teaching is to understand and produce spoken and written text. The
learners are hoped, after graduating from school, to be able to communicate in daily life or in their work orally or written in English.

As a teacher of SMPN 5 Nganjuk, the writer knows that students’ mastery of reading is low. Most students are still afraid and assume that English is difficult. In this case, motivation is needed. Motivation can be reached from their environment, the social and cultural environment and school environment. Environment is one of factors that affect the students’ intelligence. Cultural and social background influence human’s behavior and motivation to do something. People who live in different background will do the same thing in different ways. For example, a person who lives in high-class society will get information more easily because they have many facilities than those who live in low class society. School environment involves the school, students, and teachers. School with good facility will motivate the students to study. Teachers have very important role to raise the students’ motivation. Their way of teaching, (technique) and their way in preparing material will become great motivation for their students to study.

The writer, as the teacher of SMPN 5 Nganjuk, observes the lack of students’ motivation in studying English including reading. At final examination, there is standard score to graduate. When students are in the third year, they must do National Final Examination. The most parts of the examination are reading comprehension. Asking the students to read a certain text needs a long time. The students are not interested in the text available in textbook because most of the texts presented in textbook do not fulfill the students’ need.

Actually, there are four skills related to English, but reading skill and writing skill are used in English National Examination. To raise the students’
motivation in reading abilities, certain technique and material are needed. In this case, the writer tries to improve students reading skill by using three-phase technique. In addition, the intelligence of students also influences the student’s mastery in English reading ability. The students’ ability in reading is sometimes limited by his mental ability enabling him to carry. The intelligence of the reader will influence the capacity of the reader in comprehending passage. The issue for teachers who wish to honor the diversity of intelligences among their students is how to represent the other intelligences and enable each student to teach their full potential, while not losing sight that their purpose is to teach language.

B. Problem Identification

1. How can the learners of English improve their reading ability?

2. Why is it difficult for the students to learn English?

3. Why do they feel difficult to answer the question of a new reading text?

4. How can three phase technique help the learners improve their reading skill?

5. How can the students with high intelligence get a better achievement in reading than the students with low intelligence?

C. Limitation

This research is intended to know: the effectiveness of Three Phase technique in teaching reading viewed from the intelligence.
D. **Problem Statement**

1. In general, is three-phase technique more effective than conventional technique for teaching reading at the second semester of the first grade at SMPN 5 Nganjuk academic year 2008-2009?

2. Do the students with high intelligence have better achievement in reading than the students with low intelligence?

3. Is there any interaction between teaching techniques and the students’ intelligence in teaching reading by using three-phase technique?

C. **Research Objectives**

The objective of the present study is to find out:

1. Whether Three Phase Technique is more effective than conventional technique in teaching reading.

2. The students with high intelligence have better achievement in reading comprehension than the students with low intelligence.

3. Whether there is an interaction between teaching techniques and the students’ intelligence in teaching reading by using three-phase technique.

D. **The Research Significance**

1. For teacher

   The significance of the research is to explore and prove whether the three-phase technique is effective to be applied in teaching reading so that the learners can improve their reading ability as optimally as possible. The result of the study will be used as a consideration to raise teachers’ awareness in
developing and applying the suitable technique in their teaching and learning process.

2. For student

The use of three-phase technique in the teaching and learning process will surely attract the students’ attention because they feel that whatever they study in the classroom is actually useful for their daily life. They think that the classroom situation is interesting and the students can imagine themselves in a situation related to the text but beyond their own experience. Besides, the use of three-phase techniques in teaching reading will activate the students to learn.
CHAPTER II

REVIEW OF RELATED LITERATURE

A scientific framework needs some theories that support the fundamental thought. In accordance with the topic that will be discussed in the thesis, this chapter will discuss theoretical description underlying the research, rationale, and hypotheses.

A. Reading

1. Definition of Reading

   Reading is an active process to get information through written language. In other word, it can be said that reading is an interactive process that goes on between the reader and the text, resulting in comprehension. The text presents letter, words, sentences, and paragraph that encode meaning. The reader uses knowledge, skills, and strategies to determine what the meaning is. Urguhart (1998: 15) states that reading involves processing language messages. Widdoson in Urguhart (1998: 20) also states that reading is the process of getting linguistic information via print. Further, he states that getting information is one-way process from writer or text to reader. Further, Urguhart (1998: 22) states that reading is a process of receiving and interpreting information encoded in language via the medium of print.

Ruddle (1994: 92) suggests four stages of word-analysis development:

a. the logographic stage, in which children use visual context or graphic features to read words (reading “Mc Donalds” by looking at the logo, for example):
b. the traditional stage from logographic to beginning alphabetic, in which children begin to read words by shifting from visual context and specific letter association to use of the alphabetic principle (the initial sound /d/ in dog is associated with the letter /d/);

c. the alphabetic stage, in which children rely on letter-sound or grapheme phoneme relationship to read words (dog is sounded out and blended using a phonological recoding process that accesses the child’s mental lexicon); and

d. the orthographic stage, in which children use alphabetic principle e. predictable letter patterns, group with shared letter sequences and consistent pronunciation, hat, fat, mat, hate, fate, mate, for example, and analogy (-ain in rain to read the new word train) to read.

From the above statements, it can be concluded that reading is an activity, which needs a process. It is impossible to read fluently without practice to read something everyday. When people want to get information from written message, they should make it as a habit for our daily activity. It is better for us to read every single word a day than never do these. Reading activity is an individual activity. Readers can interpret what they read. Moreover, it needs process to interpret the right message from written language. Actually studying all the subject matter is a process. Reader cannot understand the meaning from language written instantly.

Pearson and Stephens in Ruddle (1994: x) state that reading is a complex orchestrated constructive process through which individuals make meaning. It is stated by Urguhart (1998: 13) in Reading a Second Language Process, Product, and Practice that reading means dealing with languages messages in written or printed form. Further, Urguhart (1989: 2) considers reading as the language
activity involving at same time or another all the cognitive processing related to language performance. They consider that any valid account of reading process must consider such cognitive aspects as reading strategies, inference, memory, relating text to background knowledge as well as decoding, and obvious language aspects as syntax and lexical meaning. Nuttal (1989: 2) states that there are some words that relate with the definition of reading, those are, understanding, interpreting, and meaning, sense, decoding, deciphering, identifying, articulating, speaking, and pronouncing. The definition of reading reflects the ideas that reading is the process of the identifying written words, besides that in great many classrooms; the reading lesson is used as an opportunity to teach pronunciations, encourage fluent and expressive speaking. Reading as interpreting means of a written text as a piece of communication. Reading is a part of daily life for those who live in literate communities that much of the time we hardly consider either the purpose or the processes involved.

Another definition of reading is stated by Stanferr, he states that reading is a mental process requiring accurate word recognition, ability to call to mind particular meanings, and ability to shift or reassociate meanings (Stanferr in Petty and Jensen, 1987: 208).

Reading is a fluent process of readers combining information from a text and their own background knowledge to build meaning. The goal of reading is comprehension (Nunan, 2003: 68). Reading is the process of understanding written language. It begins with a flutter of patterns on the retina and ends (when successful) with a definite idea about the author’s intended message. Thus, reading is at once a “perceptual” and a “cognitive” process. A process bridges and
blurs these two traditional distinctions (Rumelhart, 1994: 864). From the statement above it can be concluded that reading is a process of getting information and message from written language. In understanding the message from written language, the reader must have the background knowledge. Hence, in the process of reading, the reader must combine their background knowledge and the content of the text. Besides, they should combine their interference, memory, and the strategy of reading. Urguhard (1998: 18) states that any valid account of reading process must consider such cognitive aspects as reading strategies, inference, memory, relating text to background knowledge, as well as decoding and obvious language aspects as syntax and lexical knowledge.

Comprehension is the goal of reading. Bartram and Parry in Regina state that many students who read in a foreign language think, “reading means understanding and/or translating every word”. Good readers do not always try to understand every word, and especially the first time they read for comprehension. The primary purpose for reading is sometimes overlooked when students are asked to read difficult text; raising student’s awareness of main ideas in a text and exploring the organization of a text are essential for good comprehension (Richards, 2002: 277). From the statement above it can be said that reading is conscious activity, which is done to find out the information. A good reader is not only translating or understanding every word but also understanding all about the texts by retelling it. The reader should understand the main idea of the texts. Further, a good reader should be able to retell the specific idea of the texts. The writers of essay or story always give a message, which is written. If the readers
only translate word by word in their writing, the readers cannot pick up the message of the writing.

A good reading competence requires many components. The students should have some indicators that can indicate their reading competence such as understanding reference in the reading text, understanding main idea, understanding kinds of paragraph development, understanding the message of the story, understanding vocabulary, understanding logical inference, distinguishing between general idea and topic sentence, making accurate prediction, making restatement, and understanding grammar (Bermuister, 1974: 83).

From the description above, it can be summarized that reading comprehension is the ability to understand the message from the texts they read involving the understanding of general ideas, main ideas, explicitly and implicitly stated information, meaning of certain word, and word reference. In this research, the researcher chooses three-phase technique in teaching reading comprehension.

2. Purpose of Reading

Learning a foreign language, especially reading skill is often used for purpose. A person may read for enjoyment or to improve his knowledge. Besides, the purpose of reading determines the appropriate approach of reading. A person, hence, selects what they want to read. For instance, one person goes to the restaurant, he wants to know the price of the food so he read a menu in the restaurant, although he does not need to know the name of the food listed. A person reading poetry for enjoyment needs to recognize the words the poet uses and the ways they are put together, but he does not need to identify the main idea
and supporting idea of the poetry, just for enjoying. Further, a person reading scientific article to support his background knowledge needs to know vocabulary that is used, understand the facts that are presented as hypotheses. A person reads something because he wants to comprehend something from reading materials that he reads. Nuttal (1987: 19) states:

In foreign language, learning reading is often used for purposes, which are different from those found in mother-tongue learning. For example, we noted that reading aloud is often used (mistakenly, most experts agree) as one form of pronunciation teaching. However, the most typical use of reading a foreign language class is to teach the language itself. The typical text in a FL course book is one that helps the teacher to present or practice specific linguistics items—vocabulary, structures and so on.

Good reader read extensively, integrates information in the text with existing knowledge, have a flexible reading style, depending on what they are reading. There are some different skills interacting: perceptual processing, phonemic processing, and recall. Reading has a purpose: reading serves a function. It means that if reader gets the opportunities, reader will read more texts. They spend their time on text intending to improve their knowledge or their language.

3. Strategy of Reading

Reading strategies can be defined as “plans for solving problems encountered in constructing meaning (Richard, 2002: 289). Further, he states that they range from bottom-up vocabulary strategies, such as looking up an unknown
word in the dictionary, to more comprehensive actions, such as connecting what is being read to reader’s background knowledge.

Richards (2002: 289) states the aim of reading strategies as follows:

a. Strategies help to improve reading comprehension as well as efficiency in reading.

b. By using strategies, students will be reading in the way that expert readers do.

c. Strategies help readers to process the text actively, to monitor their comprehension, and to connect what they are reading to their own knowledge and to other parts of the text.

In other words, it can be concluded that strategies of reading help students to improve their performance on test of comprehension and recall.

Comprehension is the purpose of reading. Variations in comprehension are likely to come from different background knowledge brought to the text (Urguhart, 1998: 87). In the classroom where teacher and students share the same culture, such variations may not be very large, but in the classroom where teacher and students may come from a wide range of background knowledge and culture, the comprehension may become the major problem. Brown (2000: 306-310) states that reading comprehension is primarily a matter of developing appropriate, efficient comprehension strategies, those are:

a. Identify the purpose of reading. Efficient reading consists of clearly identifying the purpose in reading something. The reader knows what he is looking for and can weed out potential distracting information
b. Use efficient silent reading techniques for relatively rapid comprehension (for intermediate to advance level)

1) To increase efficiency of reading by a few silent reading rules
2) You don’t need to “pronounce” each word to yourself
3) Try to visually perceive more than one word at a time, preferably phrases
4) Unless a word is absolutely crucial to global understanding skip over it and try to infer its meaning through its context

c. Use grapheme rules and pattern to aid in bottom-up decoding (for beginning level learners). At the beginning level of learning English, one of the difficulties students encounter in learning to read is making the correspondences between spoken and written English. Learners may need to be given hints and explanations about certain assumption that one-to-one grapheme-phoneme correspondence will be acquired with ease, other relationship might prove difficult.

d. Skimming

Skimming consists of quickly running one’s eyes across a whole text to get the gist. Skimming gives reader the advantage of being able to predict the purpose of the passage, the main topic or message, and some of developing supporting ideas.

e. Scanning

Scanning is searching quickly for some particular piece of information in a text. Scanning exercise may ask learners to look for names or dates, to find a definition of a key concept, or to list a certain number
of supporting details. The purpose of scanning is to extract certain specific information without reading through the whole text.

f. Semantic mapping or clustering

The strategy of semantic mapping, or grouping ideas into meaningful clusters, helps the reader to provide some order to the chaos. Making such semantic maps can be done individually, but they make for a productive group work.

g. Guessing

1) guess the meaning of a word
2) guess the grammatical relationship
3) guess the discourse relationship
4) infer implied meaning
5) guess about cultural reference
6) guess content message

h. Vocabulary analysis

Several techniques are useful here: (1) look for prefixes; (2) look for suffixes; (3) look for roots that are familiar; (4) look for grammatical contexts; and (5) look at the semantic context (topic) for clues.

i. Distinguish between literal and implied meanings.

This requires the application of sophisticated top-down processing skills. The fact that not all language can be interpreted appropriately by attending to its literal and syntactic surface structure makes special demands on readers.

j. Capitalize on discourse markers to process relationships
There are many discourse markers in English that signal relationships among ideas as expressed through phrases, clause, and sentences. A clear comprehension of such markers can greatly enhance learners’ reading efficiency.

4. Teaching Reading

Reading means ‘reading and understanding’. A foreign language learners who says,” I can read the words but I don’t know what they mean’ is not, therefore, reading in this sense. He or she is merely decoding – translating written symbols into corresponding sounds (Ur, 1996: 143-145)

1. Types of Reading Activities

Text followed by comprehension question activities

Conventional types of reading activity or text consists of a text followed by comprehension questions. In this time, we shall look at some examples of this kind of material, consider what makes it more or less effective, and suggests variations. Guessing the answers for comprehension before reading is only one way of motivating learners to read a text. There are, of course, many others and these can often be based on the learners’ own previous ideas on the topic.

Setting question to answers, whether before or after the text, is not, of course, the only way to get learners to engage with the meaning of a reading passage. Sometimes no actual task is necessary, if the passage is easy and motivating to read, the learner reads, as in his or her own mother tongue, for enjoyment or information, but task is useful for two reasons: first, it may provide the learners with a purpose in reading and make the whole activity more
interesting and effective: second, we need to know how well our learners are reading, and we can get this information conveniently through looking at the results of comprehension tasks. An example of a task, which is not based on comprehension question, might be giving the learners a set of titles together with a set of extract from different newspaper articles or stories and asking them to match the titles to the appropriate extracts.

2. Thinking of Alternative Reading Activities

A locally used textbook may be one source of ideas as well as colleagues’ experience and creativity. Some suggestions for reading activities are as follows (Ur, 1996: 146):

a. Pre question: a general question before reading, asking the learners to find out a piece of information central to the understanding of the text.

b. Do-it-yourself questions. Learners compose and answer their own questions.

c. Provide a title. Learners suggest a title if none was given originally:

d. Summarize. Learners summarize the content in a sentence or two. This may also be done in the mother tongue.

e. Continue. The text is a story; learners suggest what might be happen next.

f. Preface The text is a story; learners suggest what might happen before.

g. Mistakes in the text. The text has, towards the end, occasional mistakes (wrong words: or intrusive ones: or omissions), learners are told in advance how many mistakes to look for.

h. Comparison. There are two texts on a similar topic: learners note point of similarity or difference of content.
i. Responding. The text is a letter or a provocative article: learners discuss how they would respond, or write an answer.

j. Re-presentation of content. The text gives information or tells a story: learners re-present its content through a different graphic medium. For example:
- a drawing that illustrates the text.
- coloring
- marking a map
- lists of events or items described in the text
- a diagram (such as a grid or flow chart) indicating relationships between items, characters or events.

3. Improving Reading Skills

Getting the learners to understand a simple text, is only the beginning. Reading skills need to be fostered so that learners can cope with more and more sophisticated texts and tasks, and deal with them efficiently, quickly, appropriately, and skillfully.

The characteristics of efficient reading and implications for teaching (Ur, 1996: 147-149) are as follows:

a. The text should be accessible if learners cannot understand vital information without looking up words or being given extra information from elsewhere then the activity may improve their vocabulary and general knowledge, but will be less useful as an aid to improving their reading skills as such. Note that the appropriateness of language level depends to some extent on the task. A quite difficult
text may provide useful reading for an intermediate class if the task demands understanding only of those parts that are readily comprehensible to them.

b. There is some controversies over whether learners can improve reading speed as such through training and in any case, different reading purposes demand different speeds. The most useful thing teachers can do is to provide our students with the opportunities to do as much (successful) reading as possible, including a varied diet of types of reading (fast, slow, skimming, scanning, and studying). The aim is to encourage ‘automatization’ of recognition of common words or word combinations.

c. Scanning tasks (where the student is asked in advance to look out for a specific item of information while reading) are very useful for getting learners to read selectively. Careful selection of texts is also important.

d. Again, task aimed at encouraging learners to guess or “do without” words can help to habituate them to use these strategies. The dictionary is often over-used, resulting in slower, less fluent reading, as well as frequent misunderstanding through the selection of the wrong definition. Learners should, of course, know how to use the dictionary, but they should also learn when it is necessary and when an intelligent guess is preferable. Overall, the dictionary is best used as a means to confirm or disprove a preliminary guess of their own, based on understanding of the context.
e. There are tasks, which specifically encourage prediction, such as “What do you think will happen next” or “What you think the next few words will be?”

f. Tasks should encourage learners to apply their own background knowledge and experience to the reading of texts.

g. Overall, it is best to give the task in advance; so that learners know, what their purpose is in reading. The exception is the case of extensive reading (novels or stories) when the reading material is motivating in itself and a task may actually distract and spoil the readers enjoyment.

h. We should make sure that our learners are provided with a variety of different kinds of reading tasks, and encourage them explicitly to use different strategies.

B. Three-Phase Technique

Comprehending a text is a process of interaction between the reader’s background knowledge and the text. Teachers should help the students improve their ability to comprehend the text. In order to make the structured teaching of reading, the researcher divides the classroom activities systematically. In this case, there are three main stages in teaching reading as follows:

1. Pre-Reading Activity
2. While-Reading Activity
3. Post-Reading Activity
1. Pre-Reading Activity

This activity is done before the students read the text. The aim of this activity is to lead students to predict the “content” of the reading text. In this stage, the teacher gives the brainstorming related to the texts that will be given. Abbott (1985: 92-102) states that the overriding aim in doing any class work with the learners before they begin to read a text is to create a positive attitude in their mind towards the text to be read. The following activities can be applied in the class before reading activities (Abbott: 93-95) are as follows

a. Anticipating the content

If the text has section with headings, the learners can be asked to read only these headings and then say or write down what they expect the text to be about.

b. Anticipating both the content and the form.

It is merely indication of what would actually occur. The point is that it is not only anticipating the content of what the learners will shortly read on the reverse side but it is also rehearsing the vocabulary, most of which is already known to this group of learners. The aim is to recall known language and activate language the readers may expect to come across.

c. Vocabulary work

Even if your learners are interested in the subject matter of the reading text you have chosen, they will soon lose interest if they find the vocabulary too difficult. If the majority of words are unknown to the learners, it would be wise to discard the text and choose another one which is more appropriate to their linguistic level.
2. While-reading activities. The activities are as follows (Abbott, 1985: 96-101)

a. Identifying the main idea.

The type of reading used for such practice will be skimming, since the aim is to avoid close and slow reading of the text for all details. The recommended activities are: (a) read the passage in order to give a title; (b) read the passage in order to select the most appropriate title from those given; and (c) identify the topic sentence. A paragraph will often have a topic sentence or key sentence. It helps a reader to understand a text if he can identify topic sentence because obviously these will indicate the main idea, thus acting as markers to the organization of the text.

b. Finding details in a text

The type of reading practiced here is scanning. One useful technique to use for this work is the information-gap technique, whereby the reader has to fill in the missing information on a worksheet by scanning a text, which has the required information. The teacher can often use texts from the class course-book, which must not be ignored or totally replaced by supplementary material and can manage without sophisticated aid.

c. Following a sequence.

The learner who realizes that what he is reading involves some forms of sequencing is able to understand a lot of text, even there are some unknown words. An example at the elementary level would be, for instance, the route from one place to another. Here, the teacher is usually required to indicate the sequence of moves by plotting the route on a street-plan. At much more
advanced level, an example would be a text describing some kinds of process, where sequence is also important.

d. **Inferring from the text.**

Together with identifying the main idea, the ability to infer (‘reading between lines’) is sometimes called a manipulative thinking skill. Whereas reading for literal meaning focuses on what is explicitly stated, we often go beyond the explicitly stated. We want to make conjectures, to work out what is implied in the text. In short, we think when we read. Of course, inferring presupposes literal understanding of the text. It is not an alternative, but the higher level of comprehension.

e. **Recognizing the writer’s purpose and attitude**

This can be difficult even for the native reader, since a good writer will often prefer being subtle and indirect in his intention and attitudes. Therefore, we are here concerned with reading by the advanced learners. The concept of this point is: (1) the writer’s purpose: it could be any of the following or a mixture of them: to ridicule, to amuse, to protest, to accuse, to teach, etc.; (2) The writer’s attitude: it would be determined by his purpose. It could be serious, superficial, sympathetic, angry, etc.

f. **Recognizing discourse features**

A text will consist of discourse, a combination of interrelated sentences. The combination is formed in various ways. For instance, the words will belong together as members of the same lexical field. We can identify discourse feature as (1) this, she, etc. as substitutes refer back to previous statements; (2) first, secondly, thirdly, etc. signaling a list of some sort; (3) but
indicating a change or contrast relative to some previous statement; and (4) so introducing a consequence or result of previous event.

g. The teacher’s role

While the learners are busy with their silent reading, the teacher will be very active. Not only has the teacher provided the texts and suggested ways of treating them, but also be there in the class, ready to help both individual learner with particular difficulties and the whole group if general difficulties arise. The teacher will very likely be asked the meaning of an unknown word in the text and he may be tempted to give an instant translation.

3. Post-reading activities as stated by Abbott (1985: 102) are as follows:

While the learners are reading purposely, the teacher can gain a good idea of how they are coping with their reading because the teacher will be able to circulate round the classroom, seeing how well the reading tasks are being done (Abbott, 1985: 102). However, some kind of follow-up should be valuable. While the learners are still interested in their reading, the teacher can check the result of reading tasks. Checking on the reading activity is only the first step. The teacher can exploit the learners’ experience in reading by means of further activities. For example, we may consider it valuable language work to deal with some of the unknown words, which had deliberately chosen not to consider at the pre-reading stage. We may now want to go from the receptive stage to the productive stage of learning certain words. We must not forget that reading is often a preliminary to some other language work like writing. What the learners have been reading
can sometimes be used as a model for that it can be the starting point to work on writing activity.

There are three main stages in teaching reading as follow according to http://www.greece.k12.ny.us/instruction/ela/612/Reading/Reading%20Strategies/reciprocal%20teaching.htm:

1. Pre-reading activity

This activity is done before the students read the text. The aim of this activity is to lead students to predict the “content” of the reading text. In this stage, the teacher gives the brainstorming related to the texts that will be given. Because of being asked their predictions, the student’s background knowledge or their schemata are considered important in doing this activity.

The possible questions can be:

“What do you think the story is about?”

“What do you think is the main character?”

“What do you think will happen? Why do you think that?”

2. While-Reading Activity

Asking questions as students read is appropriate for all readers, but it is especially helpful for more readers that are independent. These questions encourage students to continue reading for a purpose and help them to comprehend the text. These questions should be used at important points in the story. The examples of questions are:

“What do you think will happen next?”

“How do you think the problem will get solved?”
This is the main activity and there are three functions of this activity, for instances:

a. To help understanding of the writer’s purpose

b. To help understanding of the text structure

c. To clarify text content

The teacher should help the students in such a way that they learn to read efficiently and develop their reading comprehension. It is necessary for lower level students to listen to their teacher reading or a tape in order to understand better.

3. Post-Reading Activity

This activity is done after the students complete reading the text. It is generally used to train the students to do the new ability related to comprehending the texts. Asking questions at the end of a story allows the students to reflect on their reading and to relate it to their own experiences. It also allows the teacher to see how well the students have understood what they had read and whether they have grasped the main ideas. The questions can be:

“Tell me the story in your own words.”

“What did you like best about the story? Why?”

“What was your favorite character? Why?”

“How would you change the ending?”

The techniques for helping students to read and understand text deals with pre-reading activities, the use of comprehension questions, and simple reading tasks. Doff (1988: 170-182) states that there are three suggested activities related to reading:
1. Pre-Reading Activities

To establish the importance of pre-reading activities in class, begin by talking about reading in general (Doff, 1988: 170). Make these points:

a. In real life, we do not normally read because we want to. We usually have a purpose in reading: there is something we want to find out, some information we want to check or clarify, and some opinions we want to match against our own, etc. We also have a purpose in reading when we read stories for pleasure: we want to find out how the story develops, ‘what happen next’.

b. We do not usually begin reading with a completely empty mind. We have some idea of what we are going to read about. We will usually have certain questions in our mind (things we want to know), and we may be able to make a number of predictions or guesses (things we expect to find out about).

To realize these points, give examples of different texts. Discuss with the teachers what questions they might have in mind as they start reading, and what guesses they might make about the text. Point out that in English classes the situation is often very different. Usually students read a text not because they want to, or simply because it is there, it is important to give the students some reason for reading and to give them information they want to find the answer to. This can be done in two ways:

a. By giving a few questions for students to think about as they read, and discussing the answers afterwards.
b. By organizing an activity before students read the text, which arouses
their interest in the topic and makes them want to read

2. Reading the Text

Using questions on a text has two main aims (Doff, 1988: 175-179):

There are two main aims in asking questions on a text:

a. To check comprehension - to show the teacher and the students themselves
how well the students have understood the text, and what needs to be
more fully explained.

b. To help the students read the text. If the questions are good ones, they
should focus students’ attention on the main points and lead them to
think about the meaning of the text.

To achieve these aims, the teacher must make sure that the whole class is
involved in answering the questions and that students know why answers are right
or wrong; the questions should not be used simply to ‘test’ the students, but to
lead them towards an understanding of the text. Good questions should help the
students to read by leading them towards the main ideas of the text. But answering
questions is not the only way of doing this; we can also give students a task to do
as they are reading. Give a demonstration to show how a ‘table completion’ task
can be used as a part of a reading activity. After demonstration, discuss the
activity. Make these points: (1) The main purpose of completing the table is to
help focus students’ attention on the main points of the text, and make it easier for
them to organize the information on their minds; (2) Completing the table does
not replace asking questions. Questions are still necessary to check detail
comprehension, as students could fill the table in without fully understanding the
text. Trying to complete the table should make the students more interested in answering the questions and finding out the meaning of unfamiliar words. This type of task can be used with most texts which give factual information, and also with many texts which tell a story. It is easy for the teacher to prepare and organize, and requires no special aids or materials except the blackboard and the students’ own exercise books.

3. Eliciting a Personal Response as stated by Doff (1988: 181) are as follows:

The questions in one group are straightforward comprehension questions, focusing on the text itself. The questions in another group all go beyond the text: they require students to respond to the text and to contribute something personal that comes from their own experience or expresses their own feelings. The questions show three possible ways of eliciting a personal response from students: (1) by asking students to match what they read against their own experience; (2) by asking students imagine themselves in a situation related to the text but beyond their own experience; and (3) by asking students to express feelings or opinions.

The value of asking questions of this kind as part of reading activity is as follows:

a. Because they are talking about themselves, students usually want to answers like these; so it will also make them more interested in reading the text.

b. An important part of reading in real life is comparing what we read with our own experience.
c. Although personal questions go beyond the text, they also focus students’ attention on the text itself and make them read it carefully. To make reading a text interesting, it is important to include a variety of different activities; activities before reading the text, and questions and tasks of different kinds after reading the text.

A good rubric to keep in mind for teaching reading is the following three-part framework, Brown (2001: 315) states that:

a. Before you read: Spend some time introducing a topic, encouraging skimming, scanning, predicting, and activating schemata. Students can bring the best of their knowledge and skills to a text when they have been given a chance to” ease into” the passage.

b. While you read: Not all reading is simply extensive or global reading. There may be certain facts or rhetorical devices that students should take note of while they read. Give students a sense of purpose for reading rather than just reading because you ordered it.

c. After you read: Comprehension questions are just one form of activity appropriate for post reading. Also consider vocabulary study, identifying the author’s purpose, discussing the author’s line of reasoning, examining grammatical structures, or steering students toward a follow up writing exercise.

Because reading, like listening comprehension, is totally unobservable (we have to infer comprehension from other behaviour), it is as important in reading as it is in listening to be able to accurately assess students’ comprehension and development of skills.
Celce-Murcia (2001: 191) states that pre-reading instruction can serve five important purposes. It helps students’ access background information that can facilitate subsequent reading, provides specific information needed for successful comprehension, stimulates student interest, set up student expectations, and models strategies that students can later use on their own. During-reading instruction guides students through the text, often focusing on understanding difficult concepts, making sense of complex sentences, considering relationships among ideas or characters in the text, and reading purposefully and strategically. Post-reading instruction typically extends ideas and information from the text while also ensuring that the major ideas and supporting information are well understood. Post-reading activities often require students to use text information in other tasks (e.g. reading to write).

C. Intelligence

According to http://en.wikipedia.org/wiki/intelligence, in file://D:/intelligence/1.htm, intelligence is an umbrella term used to describe a property of the mind that encompasses many related abilities, such as the capacities to reason, to plan, to solve problem, to think abstractly, to comprehend ideas, to use language, and to learn. There are several ways to define intelligence. In some cases, intelligence may include traits such as creativity, personality, character, knowledge, and wisdom. However, most psychologists prefer not including these traits in the definition of intelligence.

Theories of intelligence can be divided into those based on an unliterary construct of general intelligence and those based on multiple intelligences. Galton,
influenced by Darwin, was the first to advance a theory of general intelligence. For Galton, intelligence was a real faculty with a biological basis that could be studied by measuring reaction times to certain cognitive tasks.

Binet and the French school of intelligence believe that intelligence quotient (IQ) was an average of numerous dissimilar abilities, rather than a real thing with specific identifiable properties. The Stanford-Binet intelligence test has been used by both theories of general intelligence and multiple intelligence. It is, however, the basis for the development of various theories of multiple intelligence.

Definition


Intelligence comes from the Latin verb intellegere, which means, “to understand”. By this rationale, intelligence is arguably different from being “smart” (able to adapt to one’s environment). At least two major “consensus” definitions of intelligence have been proposed.

Individual differs from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought (Whittaker, 1970: 443). Although these individual differences can be substantial, they are never entirely consistent: a given person’s intellectual performance will vary on different occasion, in different domains, as judged by different criteria. Concepts of “intelligence” are attempted to clarify and organize this complex set of phenomena. Although considerable clarity has been achieved in some areas, no such conceptualization has yet answered all the important questions and none
commands universal assent. Indeed, when two dozen prominent theories were recently asked to define intelligence, they gave two dozen somewhat different definitions.

A second definition of intelligence comes from “Mainstream Science on Intelligence“, which did 52 intelligence researchers in 1994:

A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings “catching on”, “making sense”, of things or “figuring out” what to do.

Another simple and efficient definition is the ability to apply knowledge in order to perform better in an environment (Wechsler in Whittaker, 1970: 443). Researchers in the fields of psychology and learning have also defined human intelligence. Based on http://en.wilkipedia.org/wiki/intelligence, Binet states that judgments, otherwise called good sense, practical sense, initiative, the faculty of adapting one’s self to circumstances. Further, Wechsler states that the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment, and Gardner(1999: 35) also states that to my mind, a human intellectual competence must entail a set of skills of problem solving enabling the individual to resolve genuine problems or difficulties that he or she encounters and, when appropriate, to create an effective product and must also entail the potential for finding or creating problems and thereby laying the groundwork for the acquisition of new knowledge.
2. Theories of Intelligence

As stated by [http://en.wikipedia.org/wiki/intelligencequotient](http://en.wikipedia.org/wiki/intelligencequotient), the most widely accepted theory of intelligence is based on psychometrics testing or intelligence quotient (IQ) tests. However, dissatisfaction with traditional IQ tests has led to the development of a number of alternative theories, all of which suggest that intelligence is the result of a number of independent abilities that uniquely contribute to human performance.

a. Psychometric Approach

Despite the variety of concepts of intelligence, the approach to understand intelligence with the most supporters and published research over the longest period is based on psychometrics testing. [http://www.americanscientist.org/template/AssetDetail/assetid/24538/page/1](http://www.americanscientist.org/template/AssetDetail/assetid/24538/page/1).

Stanford-Binet Scale is an IQ test found by two French scientist Simon and Binet. It provides a single quantitative index of mental development (Whittaker, 1970: 439). IQ tests include the Binet, Raven’s Progressive Matrices, the Wechsler Adult Intelligence Scale, and the Kaufman Assessment Battery for Children.

Based on [http://en.wikipedia.org/wiki/intelligence](http://en.wikipedia.org/wiki/intelligence), all form of IQ tests correlate highly with one another. The traditional view is that these tests measure “general intelligence factor”. However, this is by no means universally accepted. Charles Spearman is credited with having developed the concept of g. g can be derived as the principal factor using the mathematical method of factor analysis. One common view is that these abilities are hierarchically arranged with g at the vertex (overlaying all other cognitive abilities). g itself is sometimes considered
to be a two parts construct, $g_F$ and $g_C$, which stand for fluid and crystallized intelligence.

Intelligence, as measured by IQ and other aptitude tests, is widely used in educational, business, and military settings due to its efficacy in predicting behavior. $g$ is highly correlated with many important social outcomes—individuals with low IQs are more likely to be divorced, have a child out of marriage, be incarcerated, and need long term welfare support, while individuals with high IQs are associated with more years of education, higher status jobs, and higher income. Intelligence is significantly correlated with successful training and performance outcomes, and $g$ is the single best predictor of successful job performance (http://en.wikipedia.org/wiki/intelligence).

IQ tests were originally devised specifically to predict educational achievement. The inventors of the IQ did not believe they were measuring fixed intelligence. Despite this, critics argue that intelligence tests have been used to support nativistic theories in which intelligence is viewed as a qualitatively unique faculty with a relatively fixed quantity.

b. Triarchic Theory of Intelligence

Robert Sternberg’s triarchic theory of intelligence proposes three fundamental aspects of intelligence; analytic, creative, and practical of which only the first is measured to any significant extent by mainstream tests. Sternberg and Grigorenko in Jordan and Porath (2006: 225) state three abilities make up their concept of successful intelligence or triarchic intelligence. In their concept suggest the need for a balance between analytic intelligence, on the one hand, and creative and especially practical intelligence on the other. The ability to analyze is
important in school and creative is more important in the real world, while practical ability is the most important in the real world.

3. Factors Affecting Intelligence

Based on http://en.wikipedia.org/wiki/intelligence, intelligence is an ill-defined, difficult to quantify. Accordingly, the IQ tests used to measure intelligence provide only approximations of the posited real intelligence. In addition, a number of theoretically unrelated properties are known to correlate with IQ such as race, gender, and height but since correlation does not imply causation, the true relationship between these factors is uncertain. Factors affecting IQ may be divided into biological and environmental factors.

a. Biological Factors

Evidence suggests that genetic variation has a significant impact on IQ, accounting for three fourths in adults. Despite the high heritability of IQ, few genes have been found to have a substantial effect on IQ, suggesting that IQ is the product of interaction between multiple genes. Other biological factors correlating with IQ include ratio of brain weight to body weight and the volume and location of grey matter tissue on the brain. Because intelligence appears to be at least partly dependent on brain structure and the genes shaping brain development, it has been proposed that genetic engineering could be used to enhance the intelligence of animals, a process sometimes called biological uplift in science fiction. Experiment on mice has demonstrated superior ability in learning and memory in various behavioral tasks (http://en.wikipedia.org/wiki/intelligence).
b. Environmental Factors

Evidence suggests that family environmental factors may have an effect upon childhood IQ, accounting for up to a quarter of the variance. On the other hand, by late adolescence this correlation disappears, such that adoptive of two or more people with the same parents are no more similar in IQ than a person that one does not know. Moreover, adoption studies indicate that, by adulthood, adoptive siblings are no more similar in IQ than strangers are, while twins and full siblings show an IQ correlation. Consequently, in the context of the nature versus nurture debate, the “nature” component appears to be much more important than the “nurture” component in explaining IQ variance in the general population.

Cultural factors also play a role in intelligence, for example, on a setting task to measure intelligence. Westerners tend to take a taxonomic approach while the Kpelle people take a more functional approach. Instead of grouping food and tools into separate categories, a Kpelle participant stated, “the knife goes with the orange because it cuts it” (http://en.wikipedia.org/wiki/intelligence).

4. Other Species

Although human have been the primary focuses of intelligence researchers, scientists have also attempted to investigate animal intelligence, or more broadly, animal cognition. These researchers are interested in studying both mental ability in a particular species and comparing abilities between species. They study various measures of problem solving, as well as mathematical and language abilities. Some challenges in this area are defining intelligence so that it means the same thing across species (eg.comparing intelligence between literate
humans and literate animals), and then operationalizing a measure that accurately compares mental ability across different species and contexts.

Kohler’s pioneering research on the intelligence of apes is a classic example of research in this area. Stanley Core’s book, the Intelligence of Dogs is a notable popular book on the topic (http://en.wikipedia.org/wiki/intelligence). Nonhuman animals particularly noted and studied for their intelligence including chimpanzees, bonbons, and other great apes, dolphins, elephants and to some extent parrots and ravens. Controversy exists over the extent to which these judgments of intelligence are accurate

5. The Intelligence Quotient (IQ)

The first intelligence tests are used in the field of psychology. The scales designed by Binet and Simon were the first intelligence test that became widely accepted at the beginning of the 20\textsuperscript{th} century. Whittaker (1970: 439) provides a single quantitative index of mental development. Intelligence is represented as a ratio of mental age to chronological age.

Based on http://en.wikipedia.org/wiki/intelligencequotient, in file:///F:/IQ/Intelligencequotient.htm, the Wechsler scales are the most widely used instruments in the field of psychology for measuring intelligence. The designer published his first scale in the 1930s. An IQ is a score derived from one of several different standardized tests attempting to measure intelligence. Although the term”IQ” is still in common use, the scoring of modern IQ tests, is now based on a projection of the subject’s measured rank on the Gaussian bell curve with a center value of 100, and a standard deviation of 15, although different tests may have different standard deviations.
IQ scores are used in many contexts: as predictors of educational achievement or special needs, by social scientists studying the distribution of IQ scores in population and the relationships between IQ score and other variables, and as predictors of job performance and income. (file:///F:/IQ/Intelligence quotient.htm).

Terman (1916) developed the original notion of IQ and proposed this scale for classifying IQ scores (file:///F:/IQ/IQWhatScoresMean.html):

a. over 140 is genius or near genius
b. 120-140 is very superior intelligence
c. 110-119 is superior intelligence
d. 90-109 is normal or average intelligence
e. 80-89 is dullness
f. 70-79 is borderline deficiency
g. Under 70 is definite feeble-mindedness

Genius IQ is generally considered to begin around 140 to 145, representing 25% of the population (1 in 400). Here’s a rough guide based on file:///F:/IQ/IQWhatScoresMean.html:

a. 115 - 124 Above average (e.g., university students)
b. 125 -134 is Gifted (e.g., post-graduate students )
c. 135 - 144 is Highly gifted (e.g., intellectuals)
d. 145 -154 is Genius e.g., professors)
e. 155 – 164 is Genius e.g., nobel prize winners)
f. 165 – 179 is high genius
g. 180 – 200 is highest genius
h. > 200 is immeasurable genius

Based on some theories above, it can be concluded that the factors affecting intelligence are biological factors and environmental factors. Intelligence is the general mental ability of individual to think rationally and to adapt himself to new circumstances in the environment. It also includes the ability to focus attention to certain problem and create a rapid, accurate, and appropriate solution for the problem.

E. Review on Related Research

There are some researchers giving information that gives strong reason for the use of three-phase technique in teaching reading comprehension. First, Afida (2008: 27) concludes that three-phase technique can lead the students to predict the content, encourage students to continue reading for a purpose and help them to comprehend the text. Asking questions at the end of a story allows the students to reflect on their reading and to relate to their own experience. Second, Robiah (2009) states that in reading class have three activities, they are pre-reading activities, while- reading activities, and post-reading activities can help to improve the students’ ability in comprehending the text. Kusen (2009) explains that by using three-phase technique the students get the success in reading comprehension.

By considering the concept of the nature of reading, three-phase technique, and review of related research conducted the use of three-phase technique in the teaching of reading comprehension, it can be assumed that by
using three-phase technique, the students can improve their reading ability in comprehending the text.

Rationale

1. The difference between Three-Phase Technique and Conventional Method.

   Three Phase Technique is a technique of teaching and learning process where the activities in the classroom focus on the students as a center of the teaching and learning process. Pre-reading, whilst-reading and post-reading activities will help the students learn to read efficiently, develop their reading comprehension and makes the students as the central activities in the classroom. By using three-phase technique, the students can fulfill their interest in reading activity and learners will try to learn the vocabulary that’s found in the text. In other words, the learners are motivated to read. By reading a lot, their comprehension increases and it will them comprehend the reading text easily and it can improve their reading comprehension. On the contrary, conventional technique makes the students depend on the teachers explanation in reading class. This technique does not promote activity, thinking and problem solving. Conventional technique does not give much opportunity to the students to be active. So, it is assumed that three-phase technique can be more effective than conventional technique to improve the students’ reading skill.

2. The difference in Reading Achievement between the students having high intelligence and low intelligence.
The students with high intelligence are active, creative, and having good participation to study for getting competency and skill. The students with high intelligence have high ability in comprehending many texts that the teacher gives to them. They like to read everything that the teacher gives to them. Their intelligence, will, of course, influence their achievement, especially in achieving reading skill. The students with high intelligence have better achievement than the one of those having low intelligence. They tend to be more active in teaching and learning process. They have much bravery in answer teachers’ question whenever they are asked or not. They have strong intention in learning that makes them understand the lesson more easily. Meanwhile, students with low intelligence usually do not have any interest in joining the learning process. They prefer listening to the teacher to having effort to do anything by them. They become the followers in joining the reading class by waiting the teacher’ explanation and translation word by word to get the message of the text. In reading process they do it almost all the times. They are passive in the class. They depend on the teacher mostly. Therefore, it can be assumed that the achievement of the students with high intelligence is better than the one of those having low intelligence.

3. The interaction between teaching technique and the students’ intelligence.

The students with high intelligence are active, creative, and having good participation to study for getting competency and skill. The use of three-phase technique in the teaching and learning process will surely attract the students’ attention. The students with high intelligence usually have creative thinking and high curiosity in learning. By using three-phase technique the students
with high intelligence can fulfill their interest in reading activity and they will encourage themselves to understand the reading text well. Those activities will be more enjoyable to do by the students with high intelligence. This shows that Three-Phase Technique is appropriate for the students having high intelligence. The students with low intelligence, on the other hand, usually have no curiosity to study. They will only be silent and sit on their seat without talking anything in the process of reading. In this condition, the technique used is conventional technique in teaching reading instead of using three-phase technique because they are usually reluctant to actively participate in the teaching and learning process. They do not enough intention in learning. They usually have no curiosity to study more. Finally, it can be said that three-phase technique is more suitable technique for students with high intelligence and conventional technique is suitable for the students with low intelligence and therefore, it can be assumed that there is interaction between teaching technique and the students’ intelligence.

**E. Hypothesis**

After discussing the theoretical review and rationale, the hypotheses of the study are:

1. In general, Three Phase Technique is more effective than conventional technique in teaching reading in the First Year Students of SMPN 5 Nganjuk in Academic Year 2008/2009.
2. Students with high intelligence have better achievement in reading than students with low intelligence in the First Year Students of SMPN 5 Nganjuk in Academic Year 2008/2009.

3. There is an interaction between teaching techniques and the students’ intelligence in teaching reading in the First Year Students of SMPN 5 Nganjuk in Academic Year 2008/2009. Three-phase technique is more suitable technique for students with high intelligence and Conventional method is suitable for the students with low intelligence.
CHAPTER III
RESEARCH METHODOLOGY

In this chapter, the writer explains the research method that is used. In this study, the researcher presents: place and time of research, research design, population, sample and sampling, research instruments, variable, data collection techniques, and data analysis.

A. Place and Time of Research.

1. Place of Research

The research was conducted in SMPN 5 Nganjuk which is located on Yos Sudarso Street No 14 Nganjuk. Because it is the school where the researcher has been teaching English since 1997.

2. Time of Research

Preliminary observation: January 2009
Designing research proposal: February 2009
Conducting proposal seminar: April 2009
Developing research instrument: May 2009
Giving treatment and collecting data: May 2009
Discussing the data analysis: June 2009
Writing research report will be accomplished in July 2009

B. Research Design

Related to the problem and the purpose of the study in Chapter 1, the researcher applies an experimental study with a quantitative approach. Through experimentations, a cause and effect relationship can be isolated. Because of its
ability to identify caution, the experimental approach has come to represent the prototype of the scientific method for solving problems (Christensen, 1977: 35). In this research, there were two groups – experimental group and control group. In the teaching and learning process, the topics of the reading text taught to both groups are the same. In the experimental group, the students were taught by using three-phase technique, while the control group, the students were taught by using conventional method. After the treatment, both groups were given a post-test to measure the improvement of the students’ reading skill. The scores of the post-test were the data to be analyzed.

C. Research Variables

According to Borg (1963: 32),” a variable can be thought of as a quantitative expression of a construct. Variable usually takes the form of scores on measuring instruments”. It becomes object of research because variable is sometimes as a measurement of the research.

In this study, there are two variables needed to be observed. They are independent variable and dependent variable. Arends (1989: 74) states that,” independent variable refers to a property that is the presumed cause of something, whereas dependent variable is the consequence”. There are two research variables in this study, namely reading achievement as the dependent variable and three-phase technique and intelligence as the independent variables. It aims to study the independent variable three-phase technique and observe the effect on dependent variable, reading skill.
D. Population, Sample, and Sampling

1. Population

According to Borg (1963: 238)” the large group we wish to learn about is called population, whereas the smaller group we actually study is called a sample. In this study, the population is the first year students of SMPN 5 Nganjuk academic year 2008/2009, where the researcher has been teaching English since 1997. It consists of nine classes (360 students). In order to make the teaching learning process run as usual the writer uses two classes which she teaches.

2. Sample

The sample of the study is two classes, 7.4 and 7.5. From the two classes, the writer divides them into two groups, 7.4 as an experimental group and 7.5 as a control group. The number of students of each class is 40 students. So, the total number of the students is 80 students.

3. Sampling

In this study, the writer took clusters random sampling to take the sample. Using this sampling enables her to pick up a sub group from a larger group (Vockell, 1983: 102). In other words, cluster random sampling is the selection of groups or clusters, of subjects rather than individuals (Fraenkel and Wallen, 1993: 84). The class is divided into two groups, students with high intelligence and those who have low intelligence. One of the two classes is taught by using three-phase technique, and the other is taught by using conventional method, so there are four groups: (1) students with high intelligence who are taught by using three-phase technique; (2) students with low intelligence who are taught by using three-phase technique; (3) students with high intelligence who are
taught by using conventional method; (4) students with low intelligence who are taught by using conventional method.

E. Technique of Collecting the Data

The data needed in this research are the scores of students’ intelligence and the scores of the students reading comprehension. Since the scores of the students’ intelligence were taken from the result of the Intelligence test conducted by an independent institution in the researcher’s school, so the researcher only has to prepare a set of reading comprehension test. Based on the result of the Intelligence test, the students from both experimental and control group were classified into students with high intelligence and low intelligence. The reading test is used to know the students’ ability in reading comprehension. The reading test is in the form of objective test with four options. The instruments of reading test must be valid and reliable. Therefore, the reading test are tried out to know the validity and reliability. It is done before treatment. The try out is done to the other class which doesn’t belong to the experimental and the control one. At the end, the valid and reliable items are used to get the data. The reading test is conducted after treatment. The results’ intelligence test is got from “Persodata” Consultant Bureau. The formulae of them are as follows:

1. Validity

a. Reading Test Items:

\[ r_i = \frac{X_i - \bar{X}_i}{s_i} \sqrt{\frac{p_i}{q_i}} \]

where
The tryout of reading test which consist of 50 items was held on 4-th June 2009. After trying the items out, the researcher analyzed the validity and reliability of the reading test items. The result of the tryout showed that there were 28 valid out of 50 items. Then, the researcher analyzed again, and the result showed that there were 28 valid items. Finally, the researcher used 25 items for testing students’ reading comprehension. (see appendix 5, page: 137)

1. Reliability

a. Reading Test Items:

\[ r_{ik} = \frac{k}{k-1} \left( 1 - \frac{\sum \text{pq}}{s_i^2} \right) \]

where

1) \( k = \text{The number of valid items} \)

2) \( S_i = \sqrt{\frac{\sum x^2}{n}} \)

where

1) \( k = \text{The number of valid items} \)
2) $s_i^2 = \frac{\sum x_i^2}{n}$

3) $s_i^2 = \frac{\sum x_i^2}{n}$

To know whether the instrument is reliable or not, $r_o$ is compared with $r_i$. Because $r_o (0.8631)$ is higher than $r_i (0.312)$, It can be concluded that the instrument is reliable. (see appendix 5, page: 138)

F. Technique of Analyzing the Data

After collecting the data from the experimental group and control group in the form of scores, then the writer ranks the students’ scores from the greatest to the smallest. Then, from the ranking, the writer takes 27% of the greatest scores as a group of students with high intelligence and 27% of the smallest scores as a group of students with low intelligence (Rasyid, 2007: 247). Before testing the research hypothesis, the scores must be analyzed first to know whether they are in normal distribution or not and the data must be analyzed whether they are homogeneous or not. Then, she calculated the scores by using Multifactor Analysis of Variance to find out whether the difference between them is significant or not.

Summary of 2 x 2 Multifactor Analysis of Variance is as follows:

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>Method</th>
<th>Controlled group (Conventional Technique)</th>
<th>Experimental group (Three Phase Technique)</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Intelligence</td>
<td>Group 1</td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Intelligence</td>
<td>Group 2</td>
<td>Group 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The analyses are as follows:

a. The total sum of squares:
\[ \sum x_i^2 = \sum X_i^2 - \frac{\left(\sum X_i\right)^2}{N} \]

b. The sum of squares between groups.
\[ \sum x_b^2 = \frac{\left(\sum X_1\right)^2}{n_1} + \frac{\left(\sum X_2\right)^2}{n_2} + \frac{\left(\sum X_3\right)^2}{n_3} + \frac{\left(\sum X_4\right)^2}{n_4} + \frac{\left(\sum X_i\right)^2}{N} \]

c. The sum of squares within groups:
\[ \sum x_w^2 = \sum x_1^2 - \sum x_b^2 \]

d. The between-columns sum of squares:
\[ \sum x_{bc}^2 = \frac{\left(\sum X_{c_1}\right)^2}{n_{c_1}} + \frac{\left(\sum X_{c_2}\right)^2}{n_{c_2}} - \frac{\left(\sum X_i\right)^2}{N} \]

e. The between-rows sum of squares:
\[ \sum x_{rc}^2 = \frac{\left(\sum X_{r_1}\right)^2}{n_{r_1}} + \frac{\left(\sum X_{r_2}\right)^2}{n_{r_2}} - \frac{\left(\sum X_i\right)^2}{N} \]

f. The sum of squares interaction:
\[ \sum x_{int} = \sum x_b^2 - \left(\sum x_{bc}^2 + \sum x_{rc}^2\right) \]

g. The number of degrees of freedom associated with each source of variation:

- df for between-columns sum of squares = C-1
- df for between-rows sum of squares = R-1
df for interaction = (C-1)(R-1)

df for between-groups sum of squares = G-1

df for within-groups sum of squares = \(\sum (n - 1)\)

df for total sum of squares = N-1

where

C = the number of columns

R = the number of rows

G = the number of groups

n = the number of subjects in one group

N = the number of subjects in all groups

Tuckey Test

1. Three Phase Technique compared with Conventional Technique

\[ q = \frac{\overline{X}_{C1} - \overline{X}_{C2}}{\sqrt{Error\ Variance}} \cdot n \]

2. Three Phase Technique compared with Conventional Technique for the students having high intelligence

\[ q = \frac{\overline{X}_{C11} - \overline{X}_{C21}}{\sqrt{Error\ Variance}} \cdot n \]

3. Three Phase Technique compared with Conventional Technique for the students having low intelligence

\[ q = \frac{\overline{X}_{C12} - \overline{X}_{C22}}{\sqrt{Error\ Variance}} \cdot n \]

or

\[ q = \frac{\overline{X}_{C22} - \overline{X}_{C12}}{\sqrt{Error\ Variance}} \cdot n \]
The analysis of the result of the computation is (1) $q_o$ is compared with $q_t$, if $q_o > q_t$, the difference is significant. (2) to know which one is better, the means are compared.
CHAPTER IV

THE RESULT OF THE STUDY

This chapter discusses the result of the study. The result is divided into four discussions as follows: the description of the data, normality and homogeneity test, hypothesis test, and the discussion of the result of the study.

A. The Description of the Data

The data presented are the result of the reading test. It includes the mean, mode, median, standard deviation, and frequency distribution then followed by histogram and polygon. The descriptions of the data are based on the groups analyzed which are divided into six groups:

1. The data of reading test of the students or the group having high intelligence who are taught by using Three Phase Technique (A1B1)
2. The data of reading test of the students or the group having low intelligence who are taught by using Three Phase Technique (A1B2)
3. The data of reading test of the students or the group having high intelligence who are taught by using Conventional Method (A2B1)
4. The data of reading test of the students or the group having low intelligence who are taught by using Conventional Method (A2B2)
5. The data of reading test of the students who are taught using Three Phase Technique (A1)
6. The data of reading test on the students who are taught by using Conventional Method (A2)
The data of each group are described as follows:

1. The data of reading test of the students or the group having high intelligence who are taught by using Three Phase Technique (A₁B₁)

   Descriptive analysis of the data of A₁B₁ shows that the lowest score is 60 and the highest score is 92. The class is 5 and the interval is 7. The mean is 79, the mode is 75.83, the median is 71.4, and the standard deviation is 9.3. Histogram and polygon are presented in figure 1.

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>fi</th>
<th>Xi</th>
<th>fiXi</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 - 66</td>
<td>1</td>
<td>63</td>
<td>63.0</td>
</tr>
<tr>
<td>68 - 73</td>
<td>2</td>
<td>70.5</td>
<td>141</td>
</tr>
<tr>
<td>74 - 80</td>
<td>4</td>
<td>77</td>
<td>308</td>
</tr>
<tr>
<td>81 - 87</td>
<td>1</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>88 - 94</td>
<td>3</td>
<td>91</td>
<td>273</td>
</tr>
<tr>
<td>Sum</td>
<td>11</td>
<td>385.5</td>
<td>869</td>
</tr>
</tbody>
</table>

Figure 1. Histogram and Polygon Data A₁B₁
2. The data of reading test of the students or the group having low intelligence who are taught by using Three Phase Technique (A₁B₂)

Descriptive analysis of the data of A₂B₁ shows that the lowest score is 56 and the highest score is 76. The class is 5 and the interval is 4. The mean is 65.18, the mode is 65.5, the median is 61.5 and the standard deviation is 4.6. Histogram and polygon are presented in figure 2.

Table 2. Frequency Distribution of A₁B₂

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>fi</th>
<th>Xi</th>
<th>fiXi</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 - 59</td>
<td>1</td>
<td>57.5</td>
<td>57.5</td>
</tr>
<tr>
<td>60 - 63</td>
<td>3</td>
<td>61.5</td>
<td>184.5</td>
</tr>
<tr>
<td>64 - 67</td>
<td>4</td>
<td>65.5</td>
<td>262</td>
</tr>
<tr>
<td>68 - 71</td>
<td>2</td>
<td>69.5</td>
<td>139</td>
</tr>
<tr>
<td>72 - 76</td>
<td>1</td>
<td>74</td>
<td>74</td>
</tr>
<tr>
<td>Sum</td>
<td>11</td>
<td>305</td>
<td>671.0</td>
</tr>
</tbody>
</table>

Figure 2. Histogram and Polygon Data A₁B₂
3. The data of reading test of the students or the group having high intelligence who are taught by using Conventional Method \((A_2B_1)\)

Descriptive analysis of the data of \(A_1B_2\) shows that the lowest score is 56 and the highest score is 72. The class is 5 and the interval is 4. The mean is 65.86, the mode is 65.5, the median is 67.9 and the standard deviation is 5.78. Histogram and polygon are presented in figure 3.

Table 3. Frequency Distribution of \(A_1B_2\)

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>fi</th>
<th>Xi</th>
<th>fiXi</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 - 59</td>
<td>2</td>
<td>57.5</td>
<td>115</td>
</tr>
<tr>
<td>60 - 63</td>
<td>2</td>
<td>61.5</td>
<td>123</td>
</tr>
<tr>
<td>64 - 67</td>
<td>2</td>
<td>65.5</td>
<td>131</td>
</tr>
<tr>
<td>68 - 71</td>
<td>3</td>
<td>69.5</td>
<td>208</td>
</tr>
<tr>
<td>72 - 75</td>
<td>2</td>
<td>74</td>
<td>147</td>
</tr>
<tr>
<td>Sum</td>
<td>11</td>
<td>327.5</td>
<td>690.5</td>
</tr>
</tbody>
</table>

Figure 3. Histogram and Polygon Data \(A_2B_1\)
4. The data of reading test of the students or the group having low intelligence who are taught by using Conventional Method (A₂B₂)

Descriptive analysis of the data of A₂B₁ shows that the lowest score is 60 and the highest score is 76. The class is 5 and the interval is 4. The mean is 68.77, the mode is 67.5, the median is 64.16 and the standard deviation is 5.6. Histogram and polygon are presented in figure 4.

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>fi</th>
<th>Xi</th>
<th>fiXi</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 - 63</td>
<td>2</td>
<td>61.5</td>
<td>123</td>
</tr>
<tr>
<td>64 - 67</td>
<td>3</td>
<td>65.5</td>
<td>196.5</td>
</tr>
<tr>
<td>68 - 71</td>
<td>3</td>
<td>69.5</td>
<td>208.5</td>
</tr>
<tr>
<td>72 - 75</td>
<td>1</td>
<td>73.5</td>
<td>73.5</td>
</tr>
<tr>
<td>76 - 79</td>
<td>2</td>
<td>77.5</td>
<td>155</td>
</tr>
<tr>
<td>Sum</td>
<td>11</td>
<td></td>
<td>756.5</td>
</tr>
</tbody>
</table>

Figure 4. Histogram and Polygon Data A₂B₂
5. The data of reading test of the students who are taught by using Three Phase Technique (A₁)

Descriptive analysis of the data of A₁ shows that the lowest score is 56 and the highest score is 92. The class is 6 and the interval is 6. The mean is 71.65, the mode is 61.5, the median is 56.1 and the standard deviation is 11.0. Histogram and polygon are presented in figure 5.

Table 5. Frequency Distribution of A₁

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>fi</th>
<th>Xi</th>
<th>fiXi</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 - 61</td>
<td>5</td>
<td>58.5</td>
<td>292.5</td>
</tr>
<tr>
<td>62 - 67</td>
<td>5</td>
<td>64.5</td>
<td>322.5</td>
</tr>
<tr>
<td>68 - 73</td>
<td>3</td>
<td>70.5</td>
<td>211.5</td>
</tr>
<tr>
<td>74 - 79</td>
<td>2</td>
<td>76.5</td>
<td>153</td>
</tr>
<tr>
<td>80 - 85</td>
<td>4</td>
<td>82.5</td>
<td>330</td>
</tr>
<tr>
<td>86 - 92</td>
<td>3</td>
<td>88.5</td>
<td>267</td>
</tr>
<tr>
<td>Sum</td>
<td>22</td>
<td></td>
<td>1576.5</td>
</tr>
</tbody>
</table>

Figure 5. Histogram and Polygon Data A₁
6. The data of reading test on the students who are taught by using Conventional Method (A2)

Descriptive analysis of the data of A2 shows that the lowest score is 56 and the highest score is 76. The class is 6 and the interval is 4. The mean is 67.22, the mode is 64.83, the median is 62.072 and the standard deviation is 6.38. Histogram and polygon are presented in figure 6.

Table 6. Frequency Distribution of B2

<table>
<thead>
<tr>
<th>Class Limit</th>
<th>fi</th>
<th>Xi</th>
<th>fiXi</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 - 59</td>
<td>2</td>
<td>57.5</td>
<td>115</td>
</tr>
<tr>
<td>60 - 63</td>
<td>4</td>
<td>61.5</td>
<td>246</td>
</tr>
<tr>
<td>64 - 67</td>
<td>7</td>
<td>65.5</td>
<td>458.5</td>
</tr>
<tr>
<td>68 - 71</td>
<td>4</td>
<td>69.5</td>
<td>278</td>
</tr>
<tr>
<td>72 - 75</td>
<td>1</td>
<td>73.5</td>
<td>73.5</td>
</tr>
<tr>
<td>76 - 79</td>
<td>4</td>
<td>76.5</td>
<td>30.8</td>
</tr>
<tr>
<td>Sum</td>
<td>22</td>
<td>404</td>
<td>1479</td>
</tr>
</tbody>
</table>

Figure 6. Histogram and Polygon Data A2
B. Normality and Homogeneity Test

Normality and homogeneity test must be done. The normality test is to know that the sample is in normal distribution and the homogeneity test is to know that the data are homogeneous. Each test is presented in the following section:

1. Normality Test

The sample is in normal distribution if $L_0$ (L obtained) is lower than $L_1$ (L table) at the level of significance $a = 0.05$. L stands for Lilliefors.

Table 7. Normality Test

<table>
<thead>
<tr>
<th>No</th>
<th>Data</th>
<th>The number of Sample</th>
<th>$L$ obtained ($L_0$)</th>
<th>$L$ Table ($L_1$)</th>
<th>Alfa (a)</th>
<th>Distribution of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A_1B_1</td>
<td>11</td>
<td>0.142</td>
<td>0.249</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td>2</td>
<td>A_1B_2</td>
<td>11</td>
<td>0.235</td>
<td>0.249</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td>3</td>
<td>A_2B_1</td>
<td>11</td>
<td>0.155</td>
<td>0.249</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td>4</td>
<td>A_2B_2</td>
<td>11</td>
<td>0.204</td>
<td>0.249</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td>5</td>
<td>A_1</td>
<td>22</td>
<td>0.170</td>
<td>0.190</td>
<td>0.05</td>
<td>Normal</td>
</tr>
<tr>
<td>6</td>
<td>A_2</td>
<td>22</td>
<td>0.1586</td>
<td>0.190</td>
<td>0.05</td>
<td>Normal</td>
</tr>
</tbody>
</table>

2. Homogeneity Test

Homogeneity test is done to know whether the data are homogenous. If $\chi_0^2$ is lower than $\chi_1^2 (0.05)$, it can be concluded that the data are homogenous.

Table 8. The Homogeneity Test

<table>
<thead>
<tr>
<th>Sample</th>
<th>df</th>
<th>1/df</th>
<th>$s_i^2$</th>
<th>log $s_i^2$</th>
<th>(df) log $s_i^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>0.09</td>
<td>124.891</td>
<td>2.0965</td>
<td>23.0615</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>0.09</td>
<td>128.291</td>
<td>2.1081</td>
<td>23.1891</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>0.09</td>
<td>48.29</td>
<td>1.6838</td>
<td>18.5216</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>0.09</td>
<td>31.419</td>
<td>1.4971</td>
<td>16.4681</td>
</tr>
<tr>
<td>40</td>
<td></td>
<td>0.3636</td>
<td></td>
<td></td>
<td>81.2403</td>
</tr>
</tbody>
</table>
\[ \chi^2 = 2.303 \{ B - (\sum \log S_i \times n-1) \} \]

\[ = 2.303 \times (84.49 - 81.0348) \]

\[ = 3.4552 \]

Based on the result of the calculation above, it can be seen that the \( \chi^2 \) (3.4552) is lower than \( \chi_t \) at the level of significance \( \alpha = 0.05 = 7.81 \).

Because \( \chi^2 < \chi_t \) (3.49 < 7.81), the data are homogenous.

**C. Hypothesis Testing**

Hypothesis test can be done after the results of normality and homogeneity test are fulfilled. The data analysis is done by using multifactor analysis of variance 2 x 2. \( H_0 \) is rejected if \( F_0 > F_t \). It means that there is a significant difference and an interaction. If \( H_0 \) is rejected the analysis is continued to know which group is better using Tukey test. The multifactor analysis of variance 2 x 2 and Tukey test are described as below:

a. Summary of a 2 x 2 Multifactor Analysis of Variance

**1. Multifactor Anova**

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>There Phase Technique</th>
<th>Conventional method</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (A₁)</td>
<td>CELL 1 60 68 72 76 80 80 80 84 88 92</td>
<td>CELL 2 56 56 60 60 64 64 64 68 68 76</td>
<td>Data = 11</td>
</tr>
<tr>
<td></td>
<td>Data = 11</td>
<td>Data = 11</td>
<td></td>
</tr>
</tbody>
</table>

Data = 22
\( \Sigma X = 1584 \)
\( \bar{X} = 72 \)
<table>
<thead>
<tr>
<th></th>
<th>( \Sigma X = 868 )</th>
<th>( \Sigma X = 716 )</th>
<th>( \Sigma X = 1568 )</th>
<th>( \Sigma X = 1456 )</th>
<th>( \Sigma X = 3024 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \bar{X} )</td>
<td>78.9</td>
<td>66.09</td>
<td>71.27</td>
<td>66.18</td>
<td>65.45</td>
</tr>
<tr>
<td>Low (A(_2))</td>
<td>CELL 3</td>
<td>CELL 4</td>
<td>Data = 22</td>
<td>Data = 44</td>
<td></td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>60</td>
<td>( \Sigma X = 1440 )</td>
<td>( \Sigma X = 3024 )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>56</td>
<td>( X = 63.63 )</td>
<td>( X = 740 )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>60</td>
<td>( \Sigma X = 700 )</td>
<td>( \Sigma X = 740 )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>64</td>
<td>( \bar{X} = 63.63 )</td>
<td>( \bar{X} = 67.27 )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>64</td>
<td>68</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>64</td>
<td>68</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>64</td>
<td>72</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td></td>
<td>68</td>
<td>64</td>
<td>76</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>76</td>
<td>68</td>
<td>76</td>
<td>Data = 11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data = 11</td>
<td>Data = 11</td>
<td>Data = 11</td>
<td>Data = 11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>( \Sigma X = 700 )</td>
<td>( \Sigma X = 740 )</td>
<td>( X = 63.63 )</td>
<td>( X = 740 )</td>
<td></td>
</tr>
</tbody>
</table>

**Total**

<table>
<thead>
<tr>
<th></th>
<th>Data = 22</th>
<th>Data = 22</th>
<th>Data = 44</th>
<th>Data = 44</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \Sigma X = 1568 )</td>
<td>( \Sigma X = 1456 )</td>
<td>( \Sigma X = 3024 )</td>
<td>( \Sigma X = 3024 )</td>
</tr>
<tr>
<td></td>
<td>( \bar{X} = 71.27 )</td>
<td>( \bar{X} = 66.18 )</td>
<td>( \bar{X} = 68.545 )</td>
<td>( \bar{X} = 68.545 )</td>
</tr>
</tbody>
</table>

**F. Anova**

\[
F.\text{ Ms. Groups} = \frac{1594}{3} = 531.39 \\
F.\text{ column} = \frac{285.09}{49.164} = 5.798 \\
F.\text{ row} = \frac{471.275}{49.164} = 9.585 \\
F.\text{ ic} = \frac{837.805}{49.164} = 17.002 \\
F.\text{ row} = \frac{471.275}{49.164} = 9.585 \\
F.\text{ interaction} = \frac{837.805}{49.164} = 17.002
\]
Table 9: Summary Multifactor Analysis of Variance

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>SS</th>
<th>dF</th>
<th>Ms</th>
<th>F₀</th>
<th>F₁(0.5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between columns</td>
<td>285.09</td>
<td>1</td>
<td>285.09</td>
<td>5.798</td>
<td>4.08</td>
</tr>
<tr>
<td>Between rows</td>
<td>471.275</td>
<td>1</td>
<td>471.275</td>
<td>9.585</td>
<td>4.08</td>
</tr>
<tr>
<td>Columns by rows</td>
<td>837.805</td>
<td>1</td>
<td>837.805</td>
<td>17.002</td>
<td>4.08</td>
</tr>
<tr>
<td>Between groups</td>
<td>1594.17</td>
<td>3</td>
<td>531.39</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1966.56</td>
<td>40</td>
<td>49.164</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>3560.73</td>
<td>43</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Based on the table above, it can be concluded that:

1) Because $F_0$ between columns (5.79) is higher than $F_1$ at the level of significance $\alpha = 0.05$ (4.08), the difference between columns is significant. It can be concluded that the technique of teaching reading differ significantly from one another in their effect on the performance of the subject in the experiment. The mean score of students using Three –Phase Technique (71.27) is higher than using Conventional Method (66.18). It means that teaching reading using Three-Phase Technique is more effective than using Conventional Method.

2) Because $F_{row}$ between row (9.58) is higher than $F_1$ at the level of significance $\alpha = 0.05$ (4.08). The difference between rows is significant. It can be concluded that the students having high and those having low IQ are significantly different. The mean score of students having high IQ (78.9) is higher than low IQ (63.63). It means that the students reading achievement having high IQ and low IQ is significant.

3). Because $F_{interaction}$ between group (17.002) is bigger than $F_1$ at the level of significance $\alpha= 0.05$ (4.08). There is interaction effect between the two variables, teaching method and intelligence, It means the effect of teaching method depend on the degree of intelligence. Three-phase technique is more
suitable technique for the students with high intelligence, while conventional method is suitable technique for students with low intelligence in teaching reading comprehension.

**Tukey Test**

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>There Phase Technique</th>
<th>Conventional method</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>High ((A_1))</td>
<td>Group 1 (\text{Data} = 11) (\sum x = 868) (\bar{x} = 78.9)</td>
<td>Group 2 (\text{Data} = 11) (\sum x = 716) (\bar{x} = 65.09)</td>
<td>(\text{Data} = 22) (\sum x = 1584) (\bar{x} = 72)</td>
</tr>
<tr>
<td>Low ((A_2))</td>
<td>Group 3 (\text{Data} = 11) (\sum x = 700) (\bar{x} = 63.63)</td>
<td>Group 4 (\text{Data} = 11) (\sum x = 740) (\bar{x} = 67.27)</td>
<td>(\text{Data} = 22) (\sum x = 1440) (\bar{x} = 65.45)</td>
</tr>
<tr>
<td>Total</td>
<td>(\text{Data} = 22) (\sum x = 1568) (\bar{x} = 71.27)</td>
<td>(\text{Data} = 22) (\sum x = 1456) (\bar{x} = 66.18)</td>
<td>(\text{Data} = 44) (\sum x = 3024) (\bar{x} = 68.72)</td>
</tr>
</tbody>
</table>

1. Three Phase Technique compared with Conventional Method

\[
q = \frac{\bar{X}_{c1} - \bar{X}_{c2}}{\sqrt{\text{Error Variance}}} \cdot \frac{1}{n} = \frac{71.27 - 66.18}{\sqrt{49.167}} \cdot \frac{1}{22} = 15.09 \cdot 1.494 = 3.406
\]

\(q_0\) between columns (3.406) is higher than \(q_t\) at the level of significance \(\alpha = 0.05\) (2.95). The difference between columns is significant.

2. Three Phase Technique compared with Conventional Technique for the students having high intelligence

\[
q = \frac{\bar{X}_{c1} - \bar{X}_{c2}}{\sqrt{\text{Error Variance}}} \cdot \frac{1}{n} = \frac{78.9 - 63.63}{\sqrt{49.164}} \cdot \frac{1}{11} = 15.27 \cdot 2.6019 = 5.868
\]

Because \(q_0\) between columns (high intelligence) (5.868) is higher than \(q_t\) at the
level of significance $\alpha = 0.05$ is 3.11 and $q_t$ at the level of significance $\alpha = 0.01$ is 4.39, teaching technique using Three Phase differs significantly from Conventional method for students who have high intelligence. Because mean $A_1B_1 (78.9)$ is higher than $A_1B_2 (63.63)$, it can be concluded that Three Phase Technique is more effective than Conventional method to teach reading for students having high intelligence.

3. Three Phase Technique compared with Conventional Technique for the students having low intelligence

$$q = \frac{\overline{X}_{c1r2} - \overline{X}_{c2r2}}{\sqrt{\text{Error Variance}}|n} = \frac{67.27 - 62.90}{\sqrt{49.164}|11} = \frac{4.37}{2.6019} = 1.6795$$

$q_o$ between cells $A_1B_2$ and $A_2B_2 (1.6795)$ is lower than $q_t$ at the level of significance $\alpha = 0.05 (3.11)$.

b. Summary of Tukey Test

The finding of $q$ is found by dividing the difference between the means by the square root of the ratio of the within group variation and the sample size.

<table>
<thead>
<tr>
<th>Between group</th>
<th>$q_o$</th>
<th>$q_t 0.05$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$A_1 - A_2$</td>
<td>3.406</td>
<td>2.95</td>
</tr>
<tr>
<td>$A_1B_1 - A_1B_2$</td>
<td>5.868</td>
<td>3.11</td>
</tr>
<tr>
<td>$A_1B_2 - A_2B_2$</td>
<td>1.6795</td>
<td>3.11</td>
</tr>
</tbody>
</table>

From the summary of Tukey test, it can be concluded that:

1. Because $q$ between columns (3.406) is higher than $q_t$ (2.95), the difference between columns is significant. It can be concluded that teaching reading
using three-phase technique to the seventh grade students at SMPN 5Nganjuk significantly differs from teaching reading using conventional method.

2. Because $q$ between columns (5.868) is higher than $q_t$ (3.11), the difference between the students having high intelligence and those having low intelligence is significant. It can be concluded that the students having high intelligence is significantly different from those having low intelligence.

3. Because $q_0$ between columns (1.6795) is lower than $q_t$ (3.11), the difference between using three-phase technique and conventional method for teaching reading to the students having low intelligence is not significant.

D. Discussion

a. Three – Phase Technique is more effective than Conventional method. Conventional method is generally described from the instructor’s point of view, and the students’ need for interaction with the instructor is not addressed (Munson in Lewison and Blouse, 2003) in http://www.reproline.jhu.edu. Conventional method emphasizes on teacher-centered. Students do the activity in teaching and learning process passively, because they just receive and take notes from the teachers’ presentation(Blanckard, 2007 in File:///C:/Documents20%and20%settings/Administrator/Training-sellyery-method.html). Three – Phase Technique is a technique of teaching and learning process where the activities and the classroom focus on the students as the centre of the teaching learning process. Abbott (1985: 92 – 102) states that pre – reading, whilst reading and post – reading activities will help the students learn to read efficiently and develop their reading
comprehension, and makes the students as the central activities in the classroom. The students have to be more active in the teaching and learning process. On the contrary, Conventional method makes the students depend on the teacher’s explanation and translation is almost all the times in reading class. The teacher will be engaged in many planning decisions, such as deciding what he/she wants to teach, when he/she wishes teach, and how he/she will go about the reading process (Parsons, Hinson, and Brown, 2001: 11). The students only wait until all the words are translated by the teacher to get the massage of the text given to them. This model does not promote achievement in creativity, thinking, and problem solving. Therefore, Three – Phase Technique is more effective than Conventional method.

b. The reading achievement of the students with high intelligence is better than the students with low intelligence. Three-phase technique focuses on students’ attention on the text itself and makes them read it carefully. To make reading a text interesting, it is important to include variety of different activities, activities before reading the text, and questions and tasks of different kinds (Doff, 1988: 170 – 182 ). The students have to be more active in the classroom. Therefore, Three – Phase Technique is more effective than Conventional Method for the students having high intelligence. The students with high intelligence have much bravery to answer teacher’s question whenever they are asked or not. They have strong intention in learning that makes them understand the lesson more easily. Meanwhile, the students with low intelligence usually do not have any
They have low interest in joining the learning process. They are passive in the class. They depend on the teacher mostly. Conventional method is more effective than Three – Phase Technique for students having low intelligence. One of characteristics of key element in Conventional Method is teacher centrality. It means that teacher always control the class activity. The teacher decides what is to be learnt and how and is visibly in charge. The teacher will be engaged in many planning decisions, such as deciding what he/she wants to teach, when he/she wishes to teach, and how he/she will go about the reading process (Parsons, Hinson, and Brown, 2001: 11). The students who have low intelligence usually do not have any interest in joining the learning process. They usually prefer having Conventional Method in joining reading class. They do not need to be more active in the class. They prefer listening to the teacher to having effort to do anything by themselves. They become the followers in joining the reading class by waiting the teacher’s explanation and translation word by word to get the massage of the text. In reading process they do it almost all the times. They are passive in the class. They depend on the teacher mostly. Conventional method refers to a type of reading activity or text consists of text followed by comprehension questions (Ur, 1996: 143 – 145). Teacher always explains and translate the whole text to get the message of the text. After the students answer comprehension question and the teacher always gives correction for the mistake that the students make (Cruickshank, Bainer, and Metcalf, 1999: 224). Therefore, Conventional Method is more effective for the students
having low intelligence. There is an interaction between teaching technique and intelligence.

c. There is interaction between teaching technique and intelligence. Teaching technique which is used by the teacher in the class gives a big influence for the success of the teaching and learning process. Three – Phase Technique makes the students more active in teaching and learning process. The teacher helps the students improve their ability to comprehend the text. The aim of this activity is to lead students to predict the content of the reading text, encourage students to continue reading for a purpose and help them comprehend the text. Asking questions at the end of a story allows the students to reflect on their reading and to relate it to their own experiences. In learning activity, teacher creates lessons by using the various types (Crowl, Kamiosky, and Podell, 1997: 187). Intelligence has an important role in influencing learning activity. If the students have high intelligence, they have high ability in comprehending many texts that the teacher gives to them. They like to read anything that the teacher gives to them. Three – Phase Technique can make the students more active in joining the teaching learning process for those having high intelligence and conventional method is more effective for students having low intelligence, because in this method the teacher always help the students to understand the text. The teacher usually translates word by word, sentence by sentence to help the students understand the text. The teacher gives the explanation in the straight forward way and gives feedback and direct correction for the students’ mistake (Cruickshank, Bainer, and Metcalf, 1999: 224). It is the
characteristics for the students having low intelligence. The students are passive in the class and they just become the followers in the teaching and learning process. It can be concluded that there is an interaction between teaching techniques and the degree of intelligence.
CHAPTER V
CONCLUSION, IMPLICATION, AND SUGGESTION

A. Conclusion

Based on the descriptions of the data analysis, the writer can come to the research findings as follows:

1. Three – Phase Technique is more effective than Conventional Method for teaching reading in the First Year Students of SMPN 5 Nganjuk in Academic Year 2008/2009.

2. Students having high intelligence have better achievement in reading than students with low intelligence in the First Year Students of SMPN 5 Nganjuk in Academic Year 2008/2009.

3. There is an interaction between the two variables, the technique of teaching techniques and the degree of intelligence.

Based on the results of this research it can be concluded that three-phase technique used for teaching reading to the seventh grade students of SMP Negeri 5 Nganjuk is an effective teaching technique to improve students reading ability. Therefore, it is recommended that (1) it is better for teachers to apply three-phase technique in the teaching and learning process; and (2) future researcher can conduct research on the same kind with different sample and different students’ condition.
B. Implication

Three – Phase Technique is more effective than Conventional Method for teaching reading. Three – Phase Technique is a technique of teaching and learning process where the activities in the classroom focus on the students as the centre of the teaching and learning process. Pre-reading, whilst-reading, and post-reading activities will help the students learn to read efficiently and develop their reading comprehension and makes the students as the central activities in the classroom. The teacher can improve students’ ability in comprehending the text by using Three-Phase technique for teaching reading. Three-Phase Technique can be used to make the students active and more interested in joining the teaching learning process in the class, because this technique is presented by giving the brainstorming related to the texts that will be given. These questions encourage students to continue reading for purpose and help them to comprehend the text. Asking question at the end of story allows the students to reflect on their reading and to their own experiences. It also allows the teacher to see how well the students have understood what they have read and whether they have grasped the main idea. By using Three – Phase Technique the students will try to learn the vocabulary that is found in the texts. In other words, the students are motivated to read. By reading a lot, their comprehension improves, and it will help them comprehend the reading text easily and it can improve their reading comprehension. On the contrary, conventional method makes the students depend on the teachers’ explanation in reading class. This method does not promote creativity, thinking, and problem solving. Conventional method does not give much opportunity to the students to be active.
Three-Phase technique is more effective than Conventional Method. The students with high intelligence are active, creative, and having good participation to study for getting competency and skill. By using Three-Phase Technique, the students with high intelligence can fulfill their interest in reading activity and they will encourage themselves to understand the reading text well. Those activities will be more enjoyable to do by students with high intelligence. It is very effective technique in teaching reading due to their characteristics. Conventional Method is more effective than Three – Phase Technique for the students having low intelligence because the students are passive in the classroom and they depend much on the teacher. The technique used by the teacher indicates the form of learning.

There is an interaction in the teaching and learning process. For students with high intelligence the teacher uses Three-Phase Technique, while for students with low intelligence, conventional method is suitable for them. Because each class has students who have high and low intelligence, Three-Phase Technique and Conventional Method can be used to complement each other. Since, there is an interaction between the teaching techniques and the degree or intelligence, it is important to select the technique which is suitable for the students having high and low intelligence.

C. Suggestion

Some suggestions for teachers, students and future researchers can be listed as follows:
1. For the teachers

Correct choice of teaching technique can make the teaching and learning process not only run well but also interesting and enjoyable. Teachers can use Three – Phase Technique to teach reading to improve students reading competence because it can make the students learn to read efficiently and develop their reading comprehension. Three-phase technique is a technique which will lead students to be more active and creative; thus it is good to be applied in classes. That’s why, it is recommended for teacher to apply it in their class.

2. For the Student

The students should read a lot of texts because by reading a lot, their comprehension increases and it will help them comprehend the reading text easily and it can improve their comprehension. The students should be active, creative, and having good participation to study for getting competency and skill.

3. For other researchers:

Other researchers can use this result of the study as the starting point to have research with different student’s condition. A similar research with different population and characteristics can be conducted in the future.
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http://en.wikipedia.org/wiki/Cluster sampling


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