

**MODIFIED COOPERATIVE INTEGRATED READING AND
COMPOSITION TO PROMOTE STUDENTS' READING
COMPREHENSION ACHIEVEMENT AT STKIP
MUHAMMADIYAH KOTABUMI**

(A Thesis)

By

ASEP HARDIYANTO



MASTER IN ENGLISH LANGUAGE TEACHING STUDY PROGRAM
LANGUAGE AND ARTS EDUCATION DEPARTEMENT
TEACHER TRAINING AND EDUCATION FACULTY
LAMPUNG UNIVERSITY
BANDAR LAMPUNG
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ABSTRACT

Hardiyanto, Asep 2016. *Modified Cooperative Integrated Reading and Composition to Promote Students' Reading Comprehension Achievement at STKIP Muhammadiyah Kotabumi Lampung*. Advisor Prof. Dr. Cucu Sutarsyah, M.A. Co-Advisor Hi. Ujang Suparman, M.A, Ph.D.

This is an experimental research using one class pre test post test only design. The problem which was solved in this research is related to students' reading comprehension achievement. The researcher modified one of cooperative learning techniques namely CIRC technique. He incorporated digital media into the implementation of CIRC technique. It was acknowledged that the product of this modification could be effective to be applied in reading class. Further, it was expected that this technique could be used to solve the students' reading problems. This research is aimed to investigate whether there is difference of students' reading comprehension achievement before and after being treated by digital-based cooperative integrated reading and composition (DBCIRC) and the students' perception toward the implementation of DBCIRC technique. The sample of this research was the third semester—regular A class—of English department students of STKIP Muhammadiyah Kotabumi-Lampung. In order to take the sample, the researcher used purposive sampling technique. The instruments used in this research were reading test, questionnaire about students' perception and interview guideline. The data of this research were analyzed both quantitatively and qualitatively. In analyzing quantitative data, the researcher employed paired sample t-test with significant level 0.05. Meanwhile, the qualitative data has been analyzed qualitatively. The result of the data analysis shows that the price of (p) value gotten from paired t-test was 0.000. It can be seen that (p) value (0.000) is less than significant level (0.05). In other words, H_0 is rejected and H_a is accepted. Further, it can be concluded that there is difference achievement of students' reading comprehension achievement before and after the treatments. Besides, the result of students' questionnaire and interview reveal that students' perception about the implementatio DBCIRC technique is positive.

Key Words: Reading Comprehension, DBCIRC technique, Students' Perception.

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Submitted in a partial fulfillment of
The requirements for S-2 Degree



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ACHIEVEMENT AT STKIP MUHAMMADIYAH
KOTABUMI**

Student's Name : **Asep Hardiyanto**

Student's Number : 1423042005

Study Program : Master in English Language Teaching

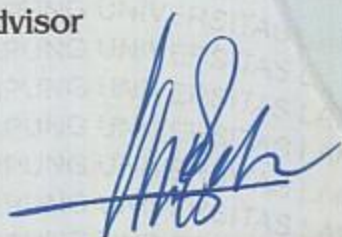
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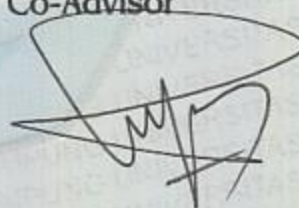
Advisory Committee

Advisor



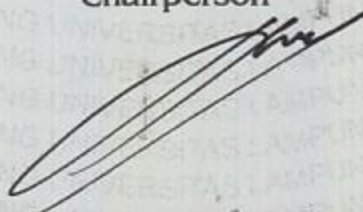
Prof. Dr. Cucu Sutarsyah, M.A.
NIP 19570406 198903 1 002

Co-Advisor



Ujang Suparman, M.A., Ph.D.
NIP 19570608 198603 1 001

Language and Arts Education Department
Chairperson

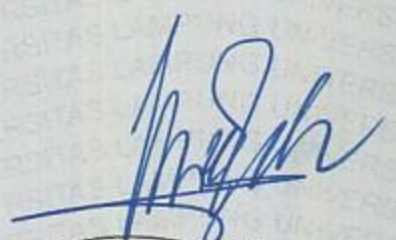


Dr. Mulyanto Widodo, M.Pd.
NIP 19620203 198811 1 001

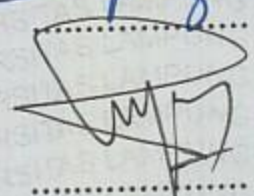
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1. Examination Committee

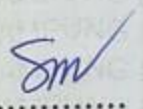
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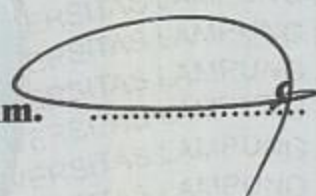
Secretary : **Ujang Suparman, M.A., Ph.D.**



Examiners : **I. Prof. Dr. Patuan Raja, M.Pd.**



II. Dr. H. Muhammad Fuad, M.Hum.



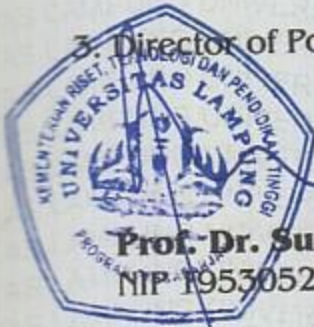
Dean of Teacher Training and Education Faculty



Dr. H. Muhammad Fuad, M.Hum.

NIP 19590722 198603 1 003

3. Director of Postgraduate Program



Prof. Dr. Sudjarwo, M.S.

NIP 19530528 198103 1 002

4. Graduated on : **March 18th, 2016**

LEMBAR PERNYATAAN

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Bandar Lampung, 28 April 2016
Yang membuat pernyataan,



Asep Hardiyanto
NPM 1423042005

CURRICULUM VITAE

Asep Hardiyanto is the last child from a harmonic couple abah Samanhudi and ibu Asiah. He was born in kotabumi on 10th september 1993. He spent his childhood with his parents and his sibling happily. When he was five years old, he started his formal education by entering Elementary School Number 2 Kotabumi tengah and graduate in academic year 2003/2004. Then he continued to the next level in Junior High School Number 1 Kotabumi and graduated by 2007. Therefore, he entered Senior High School Number 1 Kotabumi without any test because his great academic achievement when he was in junior high school.

After having finished senior high school level, he took S-1 degree in English Language Teaching Study Program of STKIP Muhammadiyah Kotabumi Lampung. He spent 3,5 years in finishing S-1 degree. Then, by 2014 he decided to continue his S-2 degree with similar study program in Lampung University.

There are several organization which were followed by him during his education; he was promoted to be chairman of OSIS SMA N 1 Kotabumi, Coordinator of youth division in *Badan Anti Narkoba, Tawuran dan HIV AIDS (BRANTAS)* Indonesia, Chairman of Extraordinary English Students Association (EXIST) STKIP M Kotabumi, Deputy of Ikatan Mahasiswa Lampung Utara (IKAM LAMPURA).

His career as an English teacher has begun since 2011. He taught in MTs and MA Hidayatul Mustafidz Kotabumi. However, for several reasons he decided to retire from that institution. Now, he is teaching in several places such as STKIP Muhammadiyah Kotabumi, Akbid An-Nur Husada and Paramadina Course.

Besides, he was also experienced with several kinds of training. Such as Students Development and Self Actualization Training which is held by KOPERTIS region II. Besides, Training for Trainer, Leadership Management Training, and Organization Development Training have been followed by him during his education process.

In term of scientific writing, he has produced some articles published both in national and international proceeding such as Seminar Nasional dan Temu Alumni (SEMNASTA) Universitas Lampung and 7th International Conference of Teaching English as a Foreign Language.

DEDICATION

This is my best dedication to

My Beloved Father & Mother: Mr. Samanhudi (alm) and Mrs. Asiah (almh)
Allahummaghfirli dzunubi waliwaalidayya warhamhuma kamaa robbayani soghiro

My Lovely Brother and Sisters: Yuliyana, M. Sahroni. A.Md. Kom ,Siti Khodijah,
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To all of my beloved family in MPBI '14, STKIP Muhammadiyah Kotabumi, Akbid An-Nur
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MOTTO

“Better technique will be better achievement”
(Anonim)

“Try not to become a man of success, but rather try to become a man of value”(Albert Einstein)

“*Sebaik- baik manusia adalah manusia yang dapat memberi manfaat kepada manusia lainnya*”(Al-Hadist)

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Bandar Lampung, April 2016
The Writer

Asep Hardiyanto
NPM 1423042005

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1. INTRODUCTION

In this chapter, the researcher provides brief explanation related to the background of the problems, identification of the problems, limitation of the problems, formulation of the research questions, objectives of the research, scope of the research, significance of the research and definition of terms

1.1 Background of the Problems

Reading comprehension is an activity in which the students try to get the main idea or the gist of what they read from a written material. Reading involves thinking process so that the students are able to understand the purpose and the messages delivered by the materials that they read. Reading must be learnt intentionally because people will not be able to read if they do not learn how to read.

Reading needs thought and creative activities. These activities require knowledge and skill which are very important for the readers. These skills are required to recognize words, understand word meaning, comprehend reading material, make inference, organize and memorize, associate information and read aloud. Reading comprehension is one of the important ways for students in order to become literate people. In addition, in a country in which English is seen as a foreign language (EFL) it is mostly believed that reading comprehension is the central means for learning new information and it is the

most important skill needed for the students' success. Thus, in order to be classified as a successful reader, the students should have those skills in reading.

However, in fact, by having one and a half years experience in teaching English at *Sekolah Tinggi Keguruan dan Ilmu Pendidikan Muhammadiyah* (STKIPM) Kotabumi, Lampung, the researcher found that the students reading skill in this college is still poor. Hence, it really influences their reading comprehension achievement. The fact related to students' poor ability to comprehend an English text is supported by the result of their reading achievement in final test which can be seen in the following table.

Table 1.1
Students' Final Test Score on Reading

No.	Score	Number of students		Frequency
		Class A	Class B	
1.	45 – 59	6	8	14
2.	60 – 69	5	4	9
3.	70 – 79	4	3	7
4.	80 – 89	1	1	2

Source: STKIP Muhammadiyah Kotabumi

Considering the table above, it can be seen that students' reading achievement is still low since there are 14 out of 32 students still get low score (see Appendix 1). It means that most of the students are still lack of reading comprehension ability. Therefore, it needs further investigation related to this problem.

It is believed that the quality of English teaching and learning activities in classroom surely is one of influencing factors toward students' learning process especially in reading comprehension. It involves lesson plans, educational media, school facilities, and teaching strategies and technique.

In the area of English learning, an ideal teaching and learning activity must have ingredient to inspire students to learn; hence, further they could become active and independent learners of English. A proper English learning activity can make the students enjoy learning English; at the same time they acquire English skills and knowledge. Such kind of activities must be so fascinating or enjoyable, so that students would be emotionally attracted to engage in it.

Dealing with the problems asserted previously, a number of problems on students' reading comprehension skill certainly existed at the second semester students in *STKIP Muhammadiyah* Kotabumi Lampung. Not only recognized along daily teaching practices, several problems were scientifically identified through the preliminary investigation which was done within the odd semester in academic year 2014/2015. The investigation was done through interview toward several students at that semester.

The first problem deals with the vocabulary size. Vocabulary is one of the keys success of comprehending English text since the content of the text is dominated by words. However, students in *STKIP Muhammadiyah* are lack of vocabulary because they rarely used English as their main tool of communication. Consequently, they can not memorize the meaning of certain words. Further, they automatically found difficulties in comprehending the text which is given by the teacher.

The next problem covers the students' difficulties in identifying the topic sentences, interpreting supporting sentences, and determining main idea. Some students asserted that they are confused in interpreting the topic sentences and supporting sentences since sometime both of those parts were not explicitly

stated. Hence, it also influences their ability in determining ideas from certain English text.

In addition, they also find the difficulties in making inferences. They inform that making inference need advance knowledge because they have to interpret the implicit meaning from certain statement. The problem is that they have limited knowledge to complete this activity. Meanwhile, this competence is really important for students to master in order to complete reading comprehension test.

Another important problem is that they seem have low interest in reading. They assumed that reading is a boring activity since they have to read long paragraph from a written text then answer the questions based on the text. When they are not familiar with the words that contain in the long paragraph they will ignore the questions and tend to do 'gambling' in choosing the answer in form of multiple choice test.

Furthermore, English classroom problems also arise from the teacher's teaching practices. It covers technique and media employed. There are some information come from the students related to this problems. First, modern teaching media have not been regularly used. The teacher only uses some copies of materials as learning materials in teaching reading comprehension in the classroom.

Secondly, it relates to the teaching materials, the teacher has not designed specific modul for reading class which is appropriate with students' characteristics. Lastly, one more significant problem is related to teaching technique. In this term, the teacher still employs monotonous technique such as

warming up at the beginning of lesson, explaining the materials, giving examples, boosting up the students' understanding and ability with exercises, practices and assignments, evaluating the students' works, and finally giving feedbacks on students' errors.

Regarding to the problems above, it surely needs a breakthrough in teaching reading skill in classroom in order to achieve the goals of learning that has been determined. To find the alternative solution for those problems, the researcher is going to undertake experimentation by implementing one of cooperative learning techniques namely CIRC technique in reading class. The reason is in cooperative learning especially in CIRC technique, the students are able to cooperate and interact one another in a group. Besides, two heads are better than one to help each other in learning. By doing those activities, the students will enjoy and involve actively in the process of teaching and learning then unconsciously it is hoped that they can improve their ability especially in reading comprehension achievement.

CIRC technique might provide a structure to help teachers and students succeed in helping all students become effective reader. This technique is potential to be applied which is expected to enable students to promote their reading comprehension. In addition, based on Rahmawati et al. (2014:3), one of the characteristics of this technique is that it might give maximum opportunities for meaningful input and output in highly interactive environment. It happens because the students have a chance to work together with their friends in a group then the teacher plays as a facilitator in the process of teaching and learning in

classroom. Further, it is possible for the teacher to give meaningful input through these activities during the teaching and learning process.

Additionally, several previous related research have been conducted by the previous researchers. First, the study about CIRC technique carried out by Durukan (2011). He applied the research in the seventh grade of students primary school at the centre of Giresun Province. This research was experimental study in which the sample were assigned into two groups; experimental and control group. After having received the treatments, the achievements of students' reading comprehension and writing skill in experimental group was superior than control group. It showed that CIRC technique was effective to improve students' reading comprehension.

Second, Jayanto (2011) carried out a collaborative action research using CIRC technique to improve students' reading comprehension. The research was conducted in SMA N 2 Karanganyar at the class of X Immersion 1. The result of the study revealed that CIRC was effective to be used to improve the students' reading comprehension ability and the teaching learning process. Third, Zarei and Keshavarz (2011) did a comparative study in which they compared the impact of the Students' Teams Achievement Division (STAD) and Cooperative Integrated Reading and Composition (CIRC) technique on reading achievement and vocabulary learning of Iranian learner. This experimental study showed that the implementation of CIRC technique had statistically significant effects on reading comprehension and vocabulary learning. It means that the score of the students' reading comprehension those who were taught by CIRC technique is superior than those who were taught by STAD technique.

Based on those related previous research, unfortunately, they have not utilized digital media to support the learning process through CIRC technique meanwhile the students now are living in the digital age. Therefore, in the current research, the researcher utilized digital media to support the teaching technique. He incorporates the digital media into the implementation of CIRC technique. The assumption is since the students now are mostly working with digital device, thus it is expected that it can trigger them to involve highly during the teaching and learning process, hence it can promote their achievement particularly in reading subject. Furthermore, the researcher named this technique as Digital-Based Cooperative Integrated Reading and Composition (DBCIRC) technique.

Besides, they have not touched the students' perception about the implementation of CIRC technique whereas students' perception is important to be investigated. It is in line with Barnes and Lock (2013:19) who state that students' perceptions of effective teaching and learning process are necessary, so that teachers in training can understand how to approach and improve their practice. From this statement, it is clear that students' perceptions can be such an evaluation for the teacher so that it can be useful for teachers to create positive teaching and learning process in the future. Therefore, the students' perception was measured in this research.

Being inspired by this new innovation in teaching technique and having investigated some field problems at STKIP *Muhammadiyah* Kotabumi Lampung—as the place where the current research was conducted, it seems very much necessary to carry out a research focusing on how DBCIRC technique can

be properly implemented to promote students' reading comprehension achievement. Besides, since this is new innovation in teaching learning process especially for the tertiary level in Indonesia context, especially in STKIP Muhammadiyah Kotabumi-Lampung, the researcher assumes that it is important to know how the students' perception about the implementation of DBCIRC technique in reading class. The reason is students' perception is expected can be able to strengthen the data whether or not this new technique is recommended to be applied to promote reading comprehension achievement in another place which has similar problems and similiar facilities. Therefore, the researcher caried out a research entitled "Modified Cooperative Integrated Reading and Composition Technique to Promote Students' Reading Comprehension Achievement at STKIP Muhammadiyah Kotabumi Lampung"

1.2 Identification of the Problems

In line with the background of the problems above, the researcher identifies the problems as follows.

1. Students' ability to read is still poor
2. Students are lack of vocabulary
3. Students find difficulties in identifying the topic sentences
4. Students find difficulties in interpreting the supporting topic
5. Students find difficulties in determining the main idea
6. Students find difficulties in making inferences
7. Modern teaching media have not been regularly used
8. Classroom management is still ineffective
9. Teaching material is still inappropriate with students' characteristics
10. Teaching technique is still ineffective with student' condition

1.3 Limitation of the Problems

Having identified all the problems occurring in the field of study above, this study limits the problems into those concerning to the students' low reading comprehension problem at the third semester students of STKIP Muhammadiyah Kotabumi Lampung due to the existing teaching techniques.

In relation to the identification of the problems above, this study covers the following scopes: firstly, the influence of using DBCIRC toward reading comprehension achievement; secondly, how is the university students' perception about the implementation of DBCIRC technique.

1.4 Formulation of the Research Questions

Dealing with the problems above, the researcher formulates the following research questions.

1. Is there any difference of students' reading comprehension achievement before and after being treated by using Digital-Based Cooperative Integrated Reading and Composition?
2. How is the university students' perception about the implementation of DBCIRC technique in reading class?

1.5 Objectives of the Research

Relating to research questions above, the writer determines the following objectives of the research.

1. To find out whether there is difference of students' reading comprehension achievement before and after being treated by using Digital-Based Cooperative Integrated Reading and Composition.
2. To describe the students' perception about the implementation of DBCIRC technique in reading class.

1.6 Significance of the Research

The findings of the research are expected to be beneficial both theoretically and practically.

1. Theoretically, the results of this study are expected to support the existing research findings on reading comprehension and the application of

cooperative integrated and reading composition in English teaching and learning.

2. Practically, become valuable information for lecturers and teachers of English to enrich their technique in teaching reading. Then, also become valuable information for further researchers in elaborating and modifying such kind of cooperative learning in reading class.

1.7 Scope of the Research

This research will be conducted at STKIP Muhammadiyah Kotabumi Lampung. The third semester students are selected purposively as the sample. The researcher applies modified cooperative integrated reading and composition during teaching and learning process. Then, the students' reading comprehension achievement will be measured as well as students' perception about the implementation of DBCIRC technique in the classroom.

1.8 Definition of Terms

1. Reading Comprehension

Reading comprehension is a set of reading activities done by people which need high level process to get the gist or messages from certain printed materials.

2. Cooperative Integrated Reading and Composition

CIRC technique is a comprehensive program for teaching reading in the upper and middle grades. The students work in pairs of within their teams on a series of cognitively engaging activities, including reading to one another, making

predictions about how narrative will be resolved, summarizing stories to one another, and practicing spelling, decoding and vocabulary. Students also work in their teams to master the idea and other comprehension skills.

3. Digital-Based Cooperative Integrated Reading and Composition (DBCIRC)

DBCIRC is a new name of CIRC technique. This new name is resulted from the modification of CIRC technique theoretically. DBCIRC technique is CIRC technique which utilize the digital media to support the teaching learning process. The utilization of digital media is in the main stage—treasure hunt activity—of teaching learning process.

4. Students' Perception

Perception is the assumption about certain objects which is obtained through senses then it is organized, interpreted and evaluated (Atkinson, Atkinson and Hilgard, 2001:201-203)

II. THEORETICAL FRAMEWORK

In this chapter, the researcher explains two major important parts which deal with review of related literature and review of previous related research. To support this research, the researcher provides explanation about the literature review which are related to this research such as concept of reading comprehension, concept of process of reading, concept of types of reading, concept of strategy of improving reading comprehension, concept of teaching technique, concept of cooperative learning, concept of types of cooperative learning, concept of cooperative integrated reading composition, concept digital-based cooperative and integrated reading composition technique. Then, at the end of this section, the researcher provides the theoretical assumption and hypotheses.

2.1 Review of Related Literature

2.1.1 Reading Comprehension

The term reading has been defined by a lot of experts. Each of them has different assumption about this term. It is because people have different purpose, different background knowledge, and different importance when they read. For those reasons, the researcher defines the term of reading from various perspectives. The explanations are hereunder.

According to Qanwal (2014:1020), reading is defined as an interpretative or decoding skill as it engages the reader to decode the textual message by identifying printed symbols in order to interpret their meanings. Whereas Grellet (1986:17) claims that “reading is a constant process of guessing, and what one brings to the text is often more important than what one finds in it”. From these statements, it can be said that reading is the process of interpreting, and guessing the gist from the printed text.

Additionally, Rubin in Hamra (2010:29) states that reading is the bringing and the getting of meaning from printed pages. Meanwhile, Veit, Gould and Clifford (1990:45) claim that reading is much more than just recognizing the words on a printed pages; it involves the ability to interpret what is read—recognizing the writer’s intention, perceiving what is implied but not stated and drawing conclusions.

Comprehension is the process of how to get understanding from reading acitivity. Hamra (2010:30) define comprehension as the process of associating and decoding meaning with the symbols that comprise the words. In addition, McNamara (2007:28) claims that comprehension is the interpretation of the information in the text. Referring to the statements above, it can be summarized that reading comprehension is a process and product of complex interaction between the properties of the text and what readers bring to the reading situation.

Moreover, Mikulecky and Jeffries (2007:74) says that comprehending is not only recognizing and understanding words but also making meaning of what the readers read and connecting the gist in the text to what they already know. In line with this, Cahyono and Widiati (2007:37) declare that reading

comprehension is an activity aimed to understand the messages of a particular text. Good reading comprehension depends on understanding the words; the more words are recognized, the better comprehension will be. It means that, to comprehend the English text, the students should have a lot of words so that they can understand the messages or the gists contained in it.

In reading comprehension, according to Milan in Kuning (2015:12) the students should be able to determine several aspects such as determining the main idea, comprehending main idea, distinguishing between main idea and supporting details, making inferences, making references, understanding vocabulary and using new words. All those aspects is elaborated in the following section.

a. Determining main idea

In reading comprehension, determining main idea is one of the important aspects which should be measured. Determining the main idea is not as easy as it may sound. Main idea is a statement which tell the author's points about the topics. It is in line with Djuhari (2008:9) who states that main idea is the essence of the paragraph or rather what the author is trying to get accross to the reader. Moreover, Mikulecky (2007:109) adds that to explain the main idea, the writer includes several supporting details in paragraph. It means that, in this activity, the students should know the supporting details so that they can find the main idea of the text given to them.

b. Finding supporting details

Supporting detail is the statements which explain, clarify, describe and illustrate the main idea. It is in line with Suparman (2012:132) who states that

supporting details is the sentence or the statements which develop the main idea, that is, they explain it by giving a reasons, examples, facts, statistics and quotations. In addition, Setiyadi (2007:5.20) declare that in finding supporting details the reader must be able to sense the relation between the main idea and the details. In term of finding supporting detail, the students need to read the text carefully since supporting detail can be found if the reader can comprehend the text well. Then, supporting detail is also important for the students to be mastered.

c. Making inference

The third aspect is making inference. According to Nation (2008:34) making inference is taking messages from the text that are not explicitly stated. Besides, it might work out cause and effect and other conjunction relationship which might not be explicitly stated. Thus, in completing this task the students should think deeper to find the answer since the messages is not explicitly seen.

d. Making reference

In making reference, the students should know the intended object which is pointed by the author. Reference is the symbolic relationship that a linguistic expression has with the concrete object or abstraction it represents. It is quite difficult for the students to make the reference if they do not read the text carefully. So, the students should read the text deeply so that they can make reference correctly.

e. Using vocabulary context

The last aspect is using vocabulary context. In this aspect, the students should be able to replace certain words in the text with it's synonym or antonym

which is suitable with the context. To complete this task, the students should have a bank of words in their mind so that they can replace the words contained in the text with another appropriate words. Nation (2009:80) confirms that word recognition during reading is affected by vocabulary knowledge, similarly vocabulary knowledge will be affected by word recognition. Therefore, this fact should lead the students to enlarge their vocabulary mastery so that it can make them more easy in comprehending the reading text.

Students' capability in mastering the elements above is a must. Therefore, those elements become indicator whether or not the students are capable in comprehending the text. Thus, having better understanding of the nature of reading comprehension above, it can be summarized that reading comprehension is a set of reading activities done by people which need high level process to interpret, guess, and eventually get the gist or messages from certain text or materials.

2.1.2 Process of Reading

Process of reading plays an important role the comprehending the text. Therefore, it needs the elaboration to make clear assumption related to the process of reading comprehension. In this case, Nuttal (1996:16) categorizes the process of reading the reading material into three kinds of process which are top-down and bottom-up process and interactive process.

2.1.2.1 Top-down Process

Top-down process means the text is read as a whole, it means the readers start from the general parts of the text to understand the details of the text. Nuttal (1996:16) states that in top-down process, the readers draw on their intelligence and experience to make prediction based on schemata. Furthermore, he states that in top-down process the readers try to see the overall purpose of the text, or get rough idea of the pattern of the writers' argument, in order to make a reasoned guess at the next step. For instance, to identify the incoming word as the readers connect the word to their knowledge of other related words and concepts.

2.1.2.2 Bottom-up Process

Bottom-up process means the readers will try to understand the small things in the text, such as word, meaning, and sentence in order to get the general idea of the text. Nuttal (1996:17) states that in bottom-up process the readers build up a meaning from the black marks on the page; recognizing letters and words, working out sentence structure in order to get full understanding of the text. For example, during bottom-up processing of a word, the readers notice the *orthography* and *phonology* of the word—the arrangements and sounds of letters in words.

From the statements above, the researcher distinguishes between top down and bottom up process in reading. In a top down process (whole language), the story is presented first. Skills are drawn from the story. Phonics sounds, word meanings, and target vocabulary are all drawn from the story. Meanwhile, In a

bottom up process, the teacher first teaches the students about letter names, letter sounds, and using phonics to encode and decode words. The basics are taught first before really reading stories. With the skills in place, it is felt that the students should be able to read.

2.1.2.3 Interactive Process

Readers' background knowledge and the knowledge of content schemata play a more crucial role than the language knowledge in reading process. In line with top-down and bottom-up process, Rumelhart's (1980: 5) states that the efficient and effective reading requires both top-down and bottom-up strategies operating interactively. Based on this statement, both those processes seem occur simultaneously in reading process. Moreover, Carrell (1992:105) claims that some second language readers are not efficient interactive processors, either because they attempt to process in a totally bottom-up fashion and may be effortful decoders at that, or because they attempt to process in a totally top-down fashion and are hence subject to schema failures as schema interference. In addition, based on Sutarsyah (2015:5) when reading, there is interaction between the graphic symbols and reader's language knowledge (bottom-up decoding skill) and the knowledge of the world (top-down comprehension strategy).

To sum up the explanation above, it is important to know the process of reading in order to help the students to get better reading comprehension achievement. Furthermore, in reading comprehension, those three processes are

needed because in comprehending the text we should not only find out the general idea, but also obtain specific information related to the text.

2.1.3 Types of Reading

In the case of reading, variety of performances derived more from the multiplicity of types of texts than from the variety of overt types of performance. Nevertheless, for considering assessment procedure, several types of reading performance are typically identified, and these will serve as organizers of various assessment tasks. According to Brown (2004:189), there are four types of reading: perceptive, selective, interactive and selective.

a. **Perceptive**

In keeping the set of categories specified for listening comprehension, similar specifications are offered here, except with some differing terminology to capture the uniqueness of reading. Perceptive reading tasks involve attending to the components of larger stretches of discourse: letters, words, punctuation, and other graphemic symbols. Bottom-up processing is implied.

b. **Selective**

This category is largely an artifact of assessment formats. In order to ascertain one's reading recognition of lexical, grammatical or discourse features of language within a very short stretch of language, certain typical tasks are used: picture-cued tasks, matching, true/false, multiple-choice, etc. Stimuli include sentences, brief paragraphs, and simple charts and graphs. Brief responses are intended as well. A combination of bottom-up and top-down processing may be used.

c. Interactive

Include among interactive reading type are stretches of language of several paragraph to one page or more in which the reader must, in a psycholinguistics sense, interact with the text. That is, reading is a process of negotiating meaning; the reader brings to the text a set of schemata for understanding it, and intake is the product of that interaction. Typical genres that lend themselves to interactive reading are anecdotes, short narratives and descriptions, excerpts from longer texts, questionnaires, memos, announcements, directions, recipes, and the like. The focus on interactive task is to identify relevant features (lexical, symbolic, grammatical, and discourse) within texts of moderately short length with the objective of retaining the information that is processed. Top-down processing is typical of such tasks, although some instances of bottom-up performance may be necessary.

d. Extensive

Extensive reading applies to texts of more than a page, up to and including professional articles, essays, technical reports, short stories, and books. Here that definition is massaged a little in order to encompass any text longer than a page. The purposes of assessment usually are to tap into a learner's global understanding of a text, as opposed to asking test takers to "zoom in" on small details. Top-down processing is assumed for most extensive tasks.

Dealing with the types of reading above, the researcher assumes that reading comprehension achievement belongs to selective reading types. Since in measuring students' reading comprehension, the researcher give a test in

multiple-choice which need the combination of top down and bottom up process to complete the activity.

2.1.4 Strategy for Improving Reading Comprehension

There are many effective reading strategies which can be used to improve comprehension skills. Many experts made general principles of instruction which can be practically applied in the reading class.

In this case, Brown (2007:366) classifies ten strategies that generally used for improving reading comprehension. The strategies are elaborated in the following explanation.

a. Identify the purpose in reading

Efficient reading consists of clearly identifying the purpose in reading something. By doing so, the reader will know what they are looking for and can weed out potential distracting information. Whenever, the teacher is teaching a reading technique, they must be sure that the students know their purpose in reading.

b. Use graphic rules and patterns to aid in bottom-up decoding.

At the beginning levels of learning English, one of the difficulties students encounter in learning to read is. Making the correspondence between spoken and written English. In many cases, learners have become acquainted with oral language and have some difficulty learning English spelling conventions. They may need hints and explanations about certain English orthographic rules and peculiarities.

c. Use efficient silent reading techniques for improving fluency to increase reading rate and comprehension efficiency we can use a few silent reading rules in teaching.

d. Skimming the text for the main ideas

Skimming consists of quickly running one's eyes across a whole text (such an essay and article) for its gist. Skimming gives readers the advantage of being able to predict the purpose of the passage, the main topic, or message, and possibly some of the developing or supporting ideas.

e. Scanning the text for specific information

Scanning or quickly searching for some particular piece or pieces of information in a text. Scanning exercises may ask students 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 specific information without reading through the whole text.

f. Use 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 technique as students collectively induce order and hierarchy to a passage. Early drafts of these maps can be quite messy - which is perfectly acceptable.

g. Guess when you aren't certain

Learners can use guessing to their advantage to do the following:

- a) Guess the meaning of a word
- b) Guess a grammatical relationship

- c) Guess a discourse relationship
- d) Guess content message

One way for learners to make guessing pay off when they do not immediately recognize a word is to analyze it in terms of what they know about it. Several techniques useful here:

- a) Look for prefixes
 - b) Look for suffixes
 - c) Look for roots that are familiar
 - d) Look for grammatical contexts that may signal information
 - e) Look at the semantic context for clues
- h. Distinguish between literal and implied meaning

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

- i. Capitalize on discourse markers to process relationships

Many discourse markers in English signal relationships among ideas as expressed through phrases, clauses, and sentences. A clear comprehension of such markers can greatly enhance learners' reading efficiency.

Strategies proposed by Brown above are expected to help the students in completing their task. In this case, it is necessary for the teacher to explore and familiarize those strategies for the students in the classroom at the beginning of teaching learning process so that they are familiar in it. The researcher would like to apply all the strategies during teaching learning process since all the strategies can help the students to comprehend the whole text, starting from

specific through the general information. Therefore, when the students find difficulties in comprehending an English text they can use those strategies to help them whenever they need.

2.1.4.1 Teaching Technique

In order to define appropriately what technique actually is, it is necessary to initially look at the differences among approach, method, and technique. Brown (2007:14) proposes the conceptualizations of approach, method, and technique as follows.

Approach: Theoretically well-informed positions and beliefs about the nature of language, the nature of language learning, and the applicability of both to pedagogical settings.

Method: A generalized set of classroom specification for accomplishing linguistic objectives. Methods tend to be concerned primarily with teacher and student roles and behaviours and secondary with such features as linguistics and subject-matter objectives, sequencing, and materials. They are almost always thought of as being broadly applicable to a variety of audience in a variety of contexts.

Technique: the specific activities manifested in the classroom that were consistent with a method and therefore were in harmony with an approach as well.

Teachers' understanding on the learners will determine the technique to use in their teaching. Therefore, in teaching, it can be said that the best technique is the appropriate technique applied in a certain situation and community. Hence students' achievement can be improved by employing appropriate techniques fitting the learners' characteristics and the learning situation.

2.1.6 Cooperative Learning

Nowadays, the paradigms of knowledge and technology have developed significantly. The same case happened in education especially in teaching

learning method. One of the popular methods which develop in the world is Cooperative Learning (CL) method. According to Bolukbas, Keskin and Polat (2011:330) CL is process through which students with various abilities carry out their learning process by working in small groups and helping each other which enable the students to maximize both their own and others' learning.

In addition, Jolliff (2007:3) informs that CL method requires pupils to work together in small groups to support each other to improve their own learning. This statement indicates that all the members in group of CL have the same responsibility to help their partner to improve their achievement in learning process. For example, in process of reading in the classroom, the students are instructed to work together in group then they communicate each other to solve the problems. Having worked together in classroom, unconsciously their knowledge will be enriched due to the interaction among them in group. The students who have high ability will help their friends who have low ability in their group so that they can get positive impact for this activity.

Moreover, it is believed that CL technique can be a useful technique for promoting students' achievement and interpersonal relationship. It is in line with Jolliff (2007:6) who mention that there are three main categories of advantages in using CL method: achievement, interpersonal relationships, and psychological health and social competence. Improvements in learning achievement can be seen through: greater productivity, higher process gain (that is, more higher-level reasoning, more frequent generation of new ideas and solutions), greater transfer of learning from one situation to another, more time on task, and greater

problem-solving. For those reasons, educators need to consider this technique to be applied in the classroom.

In using cooperative learning, Jolliff (2007:3) suggests that to be truly cooperative, learning should consist of key elements and two of these are particularly vital as a principle in applying cooperative learning namely positive interdependence and individual accountability.

Positive interdependence requires each student in a small group to contribute to the learning of the group. Students are required to work in a way so that each group member needs the others to complete the task. It is a feeling of 'one for all and all for one'. Then, individual accountability means that each member of the group is accountable for completing his or her part of the work. It requires each student in the group to develop a sense of personal responsibility to learn and to help the rest of the group to learn.

From those discussions above, it can be summarized that CL is the teaching technique in which the students work in group and do certain instructions to solve certain problems. Further, it is one of recommended technique to be applied in the classroom when teaching the students for its characteristic and benefits. Team-work is more probably resulted good outcomes rather than work-individually. In addition, when applying cooperative learning, the researcher should consider the principles and the key elements of this technique.

2.1.7 Types of Cooperative Learning

Cooperative learning does not stand alone; however, it consists of several types which have the specific characteristic in each type. Slavin (2005:11-17)

mentions numerous types of cooperative learning techniques. It will be clarified as follows.

a. Cooperative Integrated Reading Composition (CIRC)

CIRC technique is a comprehensive program for teaching reading where the students work together within their teams on a series of cognitively engaging activities. Including reading to one another, making prediction and summarizing the text, practicing spelling, and decoding vocabulary.

b. Group Investigation

Group investigation is the technique where the students work together in planning, investigating, integrating then reporting their investigation result and eventually, teacher and students evaluate their job together in classroom. The group investigation method provides an excellent structure for harnessing both the skills and students' individual interest for fruitful academic inquiry. Therefore, group investigation is really appropriate for improving students' skill.

c. Group Discussion

Variations are endless and can focus on roles within groups, on kinds of summary reporting, and on kinds of topics or information. In this technique, small-group discussion dividing the large classroom into small groups of students to achieve specific objectives permits students to assume more responsibility for their own learning, develop social and leadership skills and become involved in an alternative instructional approach.

d. Inside – Outside Circle

This technique is really complicated to be applied in the big class because it involves all the class at the same time. Inside Outside Circle technique is that get

the students up and moving. It is an activity which involves all the students in the class. The teachers will divide students into some groups. For example, if the class consists of 40 students, so it will be divided into two big groups and each of them consists of two circles; the members of the inside circle consist of ten students and so does for the members of the outside circle.

e. Jigsaw

A cooperative learning where the teacher divides into a small group, each of group members has a responsibility to the material called as Jigsaw. There will be two groups in this technique, the home group and the expert group. Jigsaw is one of activities of cooperative methods which can solve this problem. Jigsaw includes a procedure whereby students share information they have gathered with their group mates and with the other group mates in the class. Students are quizzed on all topics and the quiz scores are averaged to form team scores. So, if the team wants to be successful, the team members must not only accomplish their subtasks but also do a good job of sharing information with their teammates.

f. STAD (Student Team Achievement Division)

Each group will be responsible for the success of their group members because the STAD group becomes an important feature. STAD system is one of the simplest and most flexible of the cooperative learning methods, having will be used in second grade up to twelve grades and in such diverse subject areas as math, language art, social studies, and science. In the cooperative learning type, students are assigned to four or five members in groups, with each mirroring the others to make up the class in terms of ability, background, and gender.

g. Teams-Games-Tournament (TGT)

This replaces quizzes with academic tournaments. Improving scoring is replaced by a bumping system to spelling bee tournaments. Tournament (TGT) is a technique which work best for information that is relatively objective teaching reading descriptive text and can be used teach foreign language and any material with single right answer. Team Games Tournament, in which students play academic games with members of other teams to contribute points for their team scores. The use of games makes Team Games Tournament even more exciting and motivating to students.

In short, each type of cooperative learning has certain characteristics. Further, in the current research, the researcher uses Cooperative Integrated Reading Composition technique as the technique that was used in teaching reading comprehension.

2.1.8 Cooperative Integrated Reading and Composition

Cooperative Integrated Reading and Composition (CIRC) is one of the techniques offered within the Cooperative Learning method Gupta and Ahuja (2014:37) defines Cooperative Learning as one of the means of active learning might serve as an appropriate and promising strategy helping to increase learning effectiveness and providing the students with the skill of collaborating, cooperating, sharing and socializing. He furthermore explains that the members of the group share their perspectives, argue their points of view, and very often modify their opinions.

CIRC is originated from research and development by Slavin and his colleagues at Johns Hopkins University. It has been known that CIRC is mainly used to teach reading and composition and has been found to be effective when used in teaching reading and writing. Moreover, Richardson and Morgan in Mustafa and Samad (2015:33) highlight that in CIRC teachers use basic reading texts and traditional reading groups but assign pairs of students from different reading groups to meet and work on specialized tasks. For instance, students in the pairs might read to each other, make predictions about reading, summarize stories, write responses to stories, work together on getting the main idea of the story and often work together on vocabulary.

In addition, Slavin in Rahmawati et al. (2011:3) defines the CIRC as a comprehensive program for teaching reading in the upper and middle grades. The students work in pairs or within their teams on a series of cognitively engaging activities, including reading to one another, making predictions about how narrative will be resolved, summarizing stories to one another, and practicing spelling, decoding and vocabulary. Students also work in their teams to master the idea and other comprehension skills. A major objective of CIRC is to use cooperative teams to help students learn broadly applicable reading comprehension. CIRC integrates language and content learning, and its varied applications are in harmony with the pedagogical implications of the input, socialization, and interactive theories of second or foreign language acquisition which enhances the achievement motivation and psychosocial adjustment of second or foreign language learners.

Furthermore, Slavin in Rahmawati et al. (2011:4) affirms that CIRC aims to achieve reading comprehension, vocabulary, implicit message and spelling. He adds that CIRC consists of three main elements such as basic activities, direct teaching of reading comprehension, and integrated of language arts and writing. He suggests some elements related to the CIRC such as reading group, team, activities related to the story, check partner, and test. Reading group occurs when students are divided into groups that consist of three or four members and assigned according to their reading level. In a group or a team, students are assigned to work in pairs or dyads within their reading groups, and then the pairs are assigned to team composed of partnership from two reading groups or levels. Activities related to the story occur when the teacher introduces and discusses topic to each group. In this activity, teacher introduces reading purpose, new vocabularies, story and so on. Teacher gives guidance to each group to do activities; reading in pairs, reading aloud new vocabularies, retelling the story and checking spelling. To check student's comprehension, students check their partner understanding of text by sharing each other.

By regarding the strong ideas and logical reasons described above, it could be said that CIRC technique can support students to be able to comprehend the English text since. Therefore, it leads the researcher to conduct an experimental study to justify whether or not CIRC strategy—which has been incorporated by digital media—positively influenced the students' reading comprehension.

2.1.9 Digital-based Cooperative Integrated and Reading Composition (DBCIRC) Technique

Cooperative Integrated and Reading Composition (CIRC) technique was firstly introduced by Madden et al. during 80's era. Richardson and Morgan in Mustafa and Samad (2015:33) highlight that in CIRC teachers use basic reading texts and traditional reading groups but assign pairs of students from different reading groups to meet and work on specialized tasks.

Knowing the original concept of CIRC technique, the researcher is interested in modifying CIRC technique based on several reasons. First, Huebener in Setiyadi (2007:5.31) states that "if properly used, pictures, charts, maps, slides and records will certainly make the reading lesson more interesting, more colorful and more interesting". From this statement, it is clear that using media is really appropriate for teaching reading. Second, Gunter and Kenny (2008:85) claim that

Educators need to take notice of new learning and communications paradigms being adopted by today's learners, how they are modifying traditional notions about literacy, and whether they are directly affecting how basic reading and writing skills are acquired. We can learn a great deal about these new communications paradigms by the various definitions of the term digital media found in the syllabi of digital media courses and programs emerging in high schools, colleges, and universities across the country and abroad

Regarding the quotations above, it can be summarized that teachers are permitted to modify certain way in teaching by considering the learners today's condition. Since now they are living in the digital era, the researcher assumes that incorporating the digital media in CIRC technique will be suitable to be applied in the classroom. Therefore, the researcher names this technique as Digital-based Cooperative Integrated and Reading Composition. Furthermore, it

is expected that DBCIRC becomes valuable innovation for students and teachers in achieving the learning goals especially in reading subject.

2.1.10 Procedure of the Implementation of DBCIRC Technique

In applying DBCIRC technique in reading class, the procedures below should be followed. The procedure has been modified from CIRC proposed by Calderon, Hertz-Lazarowitz and Slavin (1998). The following are the steps of teaching reading through DBCIRC technique proposed by Calderon, Hertz-Lazarowitz and Slavin (1998:157-159).

1. Grouping the students.

Students are divided into four students consisting of different ability and background. In this stage the teacher should take an active role in placing the students in a group so that the class keep conducive.

2. Building schemata and vocabulary.

In this stage, the teacher identifies vocabulary that might be especially difficult, important or strange as a part of treasure hunt activities. As well as, the teacher builds students' schemata in order to trigger students' background knowledge and connect it with the materials that are going to discuss. Teacher types the words on a notebook and develop semantic maps with students. The maps are then displayed on the Liquid Cristal Displays (LCD) and become word bank for later use during reading, and discussion.

3. Making predictions.

The DBCIRC process emphasizes on making prediction. First, the teacher models extensively how to make and confirm prediction. Then students work in

team of four with the title of the story and its illustration to predict the element of the story.

4. Partner reading and silent reading

In partner reading, students sit in pairs and take turns reading aloud the story provided in the computer, alternating paragraph by paragraph. The story text provided in the computer will be designed as creative as possible. E.g by giving animation, pictures, and sounds related to the story so that students are interested in comprehending the text. After partner reading, each student reads the assigned text silently.

5. Treasure hunt; Story comprehension

After partner reading, pairs discuss the answer to questions on the story grammar listed in the treasure hunt. Story grammar refers to the key elements of narrative; characters, setting, problems, and problem solution. Students work together and help each other to understand the questions, go back to the text to look up the answers if necessary, look for the clues to support their answers, make inferences, synthesize and reach consensus. In this stage, the students work with digital media to complete all the tasks given by the teacher.

6. Partner checking

Having completed the previous activities, the partners have a vested interest in making sure all the students complete their work correctly because the scores of individual students become the team's score.

7. Test or evaluation

At the end of the stages, reading comprehension test was administered to check the students' progress in reading at the same time it will evaluate the students learning achievement.

Those procedures above, is expected to be effectively used in reading class, since in the several steps the researcher incorporates the digital media as tool to trigger students' effort to be involved seriously in the classroom. Finally, it is hoped that students' reading comprehension achievement can be improved through this new innovation.

2.1.11 Advantages and Disadvantages of CIRC Technique

In applying CIRC technique, the researcher need to considerate the advantages and disadvantages as well in order to know the strenght and the weakness of this technique. Slavin in Rahmawati et al. (2011:3) informs that there are six strength ideas or the advantages of CIRC technique in teaching reading such as: 1) CIRC is ideal to enhance students' skills in solving the problems, 2) the dominance of the teacher in the process learning is decreases, 3) students are motivated on the results carefully, because working in groups, 4) students can understand the meaning of questions and they can check their work with the member of group, 5) helping the weak students in the classroom, and 6) improving students' comprehension especially in solving the problem in the form of problem-solving.

In another hand, there are several disadvantages of CIRC technique which should be considered by the researcher. In the implementation of this

technique, there would be some obstacles happened. For example, when the students work in group, the teacher will find the problems in managing the class especially in a big class. Since the role of the teacher in this technique is as a facilitator, so the teacher should be able to facilitate the difficulties faced by the students during teaching and learning process. Meanwhile, if the number of the students in the class is big, it will be a problem for the teacher. Therefore, for the teachers who are going to apply this technique, they should consider the time and the condition of the students so that the class can run well.

2.1.12 Students' Perception about the Implementation of Teaching Technique

Students' perception about the implementation of teaching technique is needed to be investigated since it will reveal whether or not the technique which is applied is appropriate with the students' characteristics and students' need. Based to Choy, Cheung and Li (2006:234) students' perception is an influential factor in the successful of adoption of educational technology. The technology which was adopted in the recent education in this research is digital media. Further, students' perception has played an important role in determining participation and interaction (Choy, Cheung and Li, 2006:240). To sum up, the interaction and the participation will be fine if the students' perception is positive.

In the other hand, Atkinson & Atkinson and Hilgard (2001:201-203) states that perception is the assumption about certain objects which is obtained through senses then it is organized, interpreted and evaluated. The sumit of this process

is evaluation. Through evaluation, someone then determine their perception about something happened suround them.

Teaching technique is the technique applied by the teacher in the teaching and learning process—in the current research is DBCIRC technique. Then, the students' perception about the implementation of teaching technique can be resulted if they evaluate the teaching technique applied in the classroom. Further, in evaluating teaching technique, Richards (2001:232) and Nation (2010:124) emphasizes several aspects namely preparation, presentation, method, teachers-students' interaction, learners' satisfaction. There would be how well the teacher preparation in the classroom; how well the teacher presentation during the process of learning; how well the method employed by the teacher to facilitate the students' necessity; how well the teachers-students interaction in the classroom; and finally how well the learner's satisfaction after being treated by DBCIRC technique. The students gave their perception about each aspects which are formulated in the questionnaire and interview. Futher, those aspects above were used as the indicators for measuring students' perceptions about the implementation of teaching technique—DBCIRC technique.

2.2 Review of Previous Related Research

In order to gain a clear perspective toward this research, it is necessary to review findings of previous related researches on, primarily, reading comprehension achievement, and aspects which might correlate with it, including language teaching and learning methods and techniques since this

study aims at investigating how the new teaching technique, digital-based cooperative integrated and reading composition can be employed in a class.

There have been a lot of research on reading comprehension achievement in the framework of cooperative learning conducted both in EFL and ESL setting. First, a research about the use of CIRC technique to improve students' reading and writing skill conducted by Durukan (2011). This is experimental study which was aimed to analyze the effect of CIRC technique and traditional reading-writing pedagogical technique for primary school students. The group was composed of 45 students at the 7th grade students enrolled at a primary school at the centre of Giresun Province in the 2009/2010 academic year. Pre-test-post-test control group model was adopted in this previous study.

Experimental and control groups were randomly assigned; 24 students were grouped into experimental group and 21 students into control group. Written Expression Achievement Test (WEAT) and Reading Comprehension Achievement Test (RCAT), both developed by the researcher, were used to collect data related to the study groups' writing skills and reading comprehension skills, respectively. Results were analyzed via 2-way ANOVA test in the SPSS program. WEAT and RCAT were applied as pre-, post- and retention-test to the control and experimental groups.

At the end of the statistical analysis, it was revealed that there was a statistically significant difference between the reading and writing skills of the experimental and control groups in terms of academic achievement and retention. This difference was discovered in favour of the cooperative integrated reading and composition technique.

Second, Jayanto (2011) carried out a classroom action research using cooperative integrated and reading composition technique. The purpose of this study was to identify how the use of Cooperative Integrated Reading and Composition (CIRC) can improve the students' reading comprehension.

The method proposed in this research was collaborative action research. It was conducted collaboratively with English teacher of SMA Negeri 2 Karanganyar. The research was conducted from March 16th through May 30th 2011 to the students of class X Immersion I of SMA Negeri 2 Karanganyar. The process of the research was done through two cycles which consist of four steps, namely planning, implementing, observing and reflecting. The research data were collected by using observation, interview, field-note, documents analysis, questionnaire, photographs and test (pre-test and post-test) techniques.

The data were analyzed through descriptive analysis which consists of assembling the data, coding the data, comparing the data, building interpretation, and reporting the outcomes for the qualitative data, and simple descriptive statistics for the quantitative data. The results of the research showed that CIRC can be used to improve: (1) students' reading comprehension and (2) teaching and learning process. In conclusion, CIRC is an alternative teaching technique that benefits both for the students' achievement and for the teaching and learning process.

Third, Zarei and Keshavarz (2011) carried out the comparative study in which they compared the impact of the Student Teams-Achievement Divisions (STAD) and Cooperative Integrated Reading and Composition (CIRC) models on reading achievement and vocabulary learning of Iranian learners of English.

132 female Language learners of EFL participated in the study at National Iran English Language (NIEL) institute in Takestan.

The four experimental groups were taught using cooperative learning for one semester with STAD and CIRC technique, the control groups were taught using a non-cooperative technique. Data collected through reading comprehension and vocabulary tests were analyzed using four one-way ANOVA procedures. The results indicated that the cooperative learning model CIRC had statistically significant effects on reading comprehension and vocabulary learning, particularly for elementary EFL learners.

Fourth, Rahmawati, Padmadewi and Ratminingsih (2014) conducted a piece of research about the effect of CIRC strategy and achievement motivation toward students' reading comprehension. The aim of this study is to investigate (1) whether there is a difference in the reading comprehension between students who are taught by using CIRC strategy and those taught by using the conventional strategy; (2) an interactional effect between the reading strategy applied and achievement motivation toward students' reading comprehension; (3) a difference in reading comprehension between students with high achievement motivation who are taught by using CIRC strategy and those taught by using the conventional strategy; and (4) a difference in reading comprehension between students with low achievement motivation who are taught by using CIRC strategy and those taught by using the conventional strategy.

The study administrated a 2X2 factorial design, where 175 students were involved as the sample. The data were collected by using questionnaire and a

reading test then analyzed by Two-way ANOVA. The result indicates that (1) there is a significant difference in reading comprehension between the students who are taught by using CIRC strategy and those taught by using the conventional strategy; (2) there is an effect of the interaction between the teaching strategy applied and students' achievement motivation toward their reading comprehension; (3) there is a significant difference in reading comprehension between students with high achievement motivation who are taught by using CIRC strategy and those taught with the conventional strategy; and (4) there was significant difference in reading comprehension between the students with low achievement motivation who are taught by using CIRC strategy and those taught with the conventional strategy.

Having reviewed several studies related to reading comprehension, it is necessary to summarize and then find what have been found and what have not been found yet. Concisely, all of the research have resulted, primarily, four different findings: first, CIRC technique can be used to improve reading and writing skill; second, the researchers involve motivation achievement in teaching reading comprehension through CIRC technique. It turned out, motivation also gives benefit for implementation of CIRC technique toward reading skill; third, classroom action research shows that besides improving students' reading comprehension, CIRC technique gives benefit for the quality of teaching learning process; fourth, the researchers compare the implementation of CIRC technique and STAD technique. The result reveals that CIRC was superior than STAD technique in enhancing students reading comprehension and vocabulary learning.

Based on the previous research above, however, it seems that they have not touched the students' perception about the implementation of CIRC technique in reading class whereas students' perception is important to investigate in order to strengthen the findings of this research. Therefore, to answer this question the researcher conducted the current research.

In addition, the CIRC technique that was applied is different with the original version. The researcher incorporates the digital media into the implementation of CIRC technique in order to meet the need of students who are living in the digital era. Thus, the current research examined whether or not DBCIRC technique can promote the students' reading comprehension achievement and the students' perception was also measured as well to support the findings of the research.

2.3 Theoretical Assumption

Having reviewed all the theories above, some theoretical assumption can be drawn: first, Digital-Based Cooperative Integrated Reading and Composition (DBCIRC) is suitable to be applied in reading class for tertiary level since this technique is equipped by digital media which relevant with the students' condition who are living in the digital era. Second, The process of teaching and learning using DBCIRC technique lead the students to be active and trigger them to be enthusiastic due to the existing of digital media in reading class, thus it will unconsciously promote their reading comprehension achievement at the end of the study. At the same time, the use of digital media in the implementation of

CIRC technique will influence students perception about the implementation of this technique.

2.4 Hypotheses

Referring to the elaboration of the theories and some previous studies, the researcher formulates the hypotheses as follows.

1. The students' reading comprehension achievement in the pre test and post test will be different. In the other words, it can be said that the implementation of DBCIRC technique can promote the students' reading comprehension achievement.
2. The students will have positive perception about the implementation of DBCIRC technique in reading class.

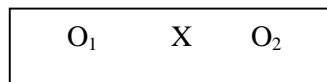
III . RESEARCH METHOD

This chapter describes the methods of this research that cover research design, population and sample, research instrument, validity, reliability, discriminating power and level of difficulty of instrument, data collecting technique, data analysis, and hypothesis test.

3.1 Research Design

In this research, the researcher used quasy experimental designs and he chose one class pretest-posttest design. In quasy experimental, the samples were not choosen randomly (Cresswel, 2009:309). So, the researcher did not random the sample in this research. In this design, it comprised of pre test, treatment and post test. In the pre and post test, the researcher distributed reading test to measure the students' reading comprehension. Then, in the treatments, he taught the students by using DBCIRC technique in order to promote students' reading comprehension achievement. Further, the design of the study was one class pretest-posttest design. According to Cohen (2000:282) the design of one class pretest-posttest design is as follows.

Experimental



Notes:

O₁ = pretest of the experiment group

O₂ = posttest of the experiment group

X = treatment which is given

Besides, to explore the second research question the researcher employed the descriptive qualitative method. Descriptive qualitative is used when the researcher needs to explore the topic which is investigated. It was in line with Fraenkel, Wallen and Hyun (2009:425-426) who states that “qualitative study is selected because the topics need to be explored”. The topic that would be explored was the students’ perception about the implementation of DBCIRC Technique. In short, the current research employs two kinds of approach: quantitative and descriptive qualitative.

3.2 Population and Sample

Population was all subjects of research that were assumed to have the same characteristics. The population in this research was the third semester students of STKIP *Muhammadiyah* Kotabumi Lampung majoring English Departement. The number of the students were 80 students which are distributed into four classes.

The sample in the current research were the students in class A. The sample in this research was taken by using purposive sampling technique. Purposive sampling technique was chosen because the sample could not selected randomly. It was in line with Cresswel (2009:309) who states that in quasy- experimental design, the samples were not choosen randomly. Besides, this technique was used since the researcher has certain goal—to make the research focus on certain subjects. Therefore, purposive sampling technique was choosen as the technique

to take the sample. Furthermore, the students in the class A were selected. The researcher took 16 students as the samples where they comprise of low, moderate, and high ability based on their achievement on reading subject at the beginning of teaching learning process (see Appendix 1). Furthermore, they received a treatment in form of DBCIRC technique.

3.3 Data Collecting Techniques

In collecting the data, the researcher used some methods which are test, questionnaire and interview.

3.3.1 Test

To answer the first research question, the researcher used pre test and post test to measure the students' reading comprehension achievement before and after being treated. The purpose of pre test is to know the students' reading achievement before the treatment, then post test was to know the students' progress or improvement in reading achievement after being treated. The test was in form of multiple-choice test consist of 40 items. (See Appendix 3). For the test instrument, the table of specification is needed. Therefore, the researcher provides the following table specification.

Table 2.3 Specification of Reading Comprehension Test

	Objective	Aspects	Number of Items	Items Number
Reading Comprehension	This specification is used to assess reading	Identifying main ideas	4	8,18,38,39
		Making inferences	11	1,3,6,7,9,10,16,19,22,24,37
		Using contexts for vocabulary	10	2,5,13,15,20,25,28,35,36

	comprehension			,40
		Identifying supporting detail	12	4,11,14,17,21,23,26,29,31,32,33,34
		References	3	12,27,30
	Total		40	

A good quality of multiple choice test should fulfill four requirements of the test which are validity, reliability, discriminating power and level of difficulty. In order to measure those aspects, the researcher conducted try out of test instrument. (see Appendix 2)

3.3.1.1 Try Out of Reading Test Instrument

Try out of reading test instrument has been administered to measure the quality of reading test instrument. The test can be used to collect the data if it is good and fulfill the requirements such as validity, reliability, discriminating power and level of difficulty. It has been conducted in STKIP *Muhammadiyah* Kotabumi. Then, it was administered for the class who were not included as the sample of the research. In term of validity, the researcher used content vailidity to measure the validity of the test. According to Cohen (2000:162) content validity covers several features of a test, namely: test coverage (the extent to which the test covers the relevant field); and test relevance (the extent to which the test items are relevant to in a particular program). Further, he confirms that to achieve content validity, expert judgement is exactly suitable to be used. Hence, in this research, the researcher used expert judgment in validating the test instrument.

Meanwhile, to measure the reliability, discriminating power, and level of difficulty, the researcher used *ITEMAN* software. In this case, Suparman (2011) considers that an item analysis should use nine steps to enter the data using a new file as follows:

1. Click **Start**
2. Select **program**
3. Select **accessories**
4. Choose and click **Notepad**
5. Save/ click **file**
6. Select and click **save as**, then name the data file, for example: Advread (make sure the file name must not exceed eight letters/ numbers.
7. Start data entry, it will be faster if you work with your friend- one of you reads students' answers and the other types them. If you work with your friend, please make sure to pronounce the letter clearly, e.g., *a* for *apple*; *b* for *ball*; *c* for *Charlie*; *d* for *doctor*; and *e* for *ent*.
8. It is advisable for you to save it frequently by clicking **File** and the **Save** so that the typed data will not loss if the electric current suddenly cuts off.
9. The data will appear like shown on the Fig 1 below.

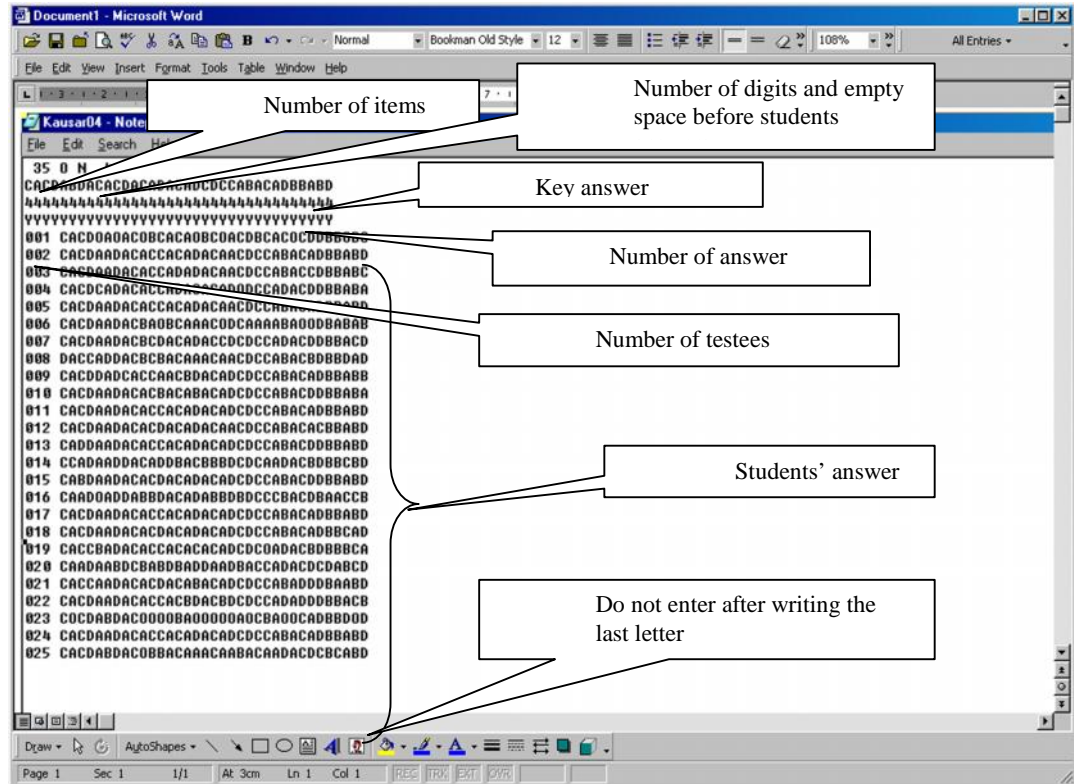


Fig1. An Example of Data File Using Notepad on Windows

Source: Suparman (2011)

In the following paragraph, the steps of how to analyze the data using *iteman* program were put forward. There are six steps that have to be done by the item analysis as follows:

1. Open *iteman* program, by clicking **Start**,
2. Select program/ click *iteman*
3. Type the name of your data file (input) as you like on *Enter the name of the input file*. For example **F:\advread.txt** then **Enter**
4. Enter the name of the output file on *Enter the name of the output file*. For example, in this case: **F:\advread.output** then click **Enter**
5. A question will appear. **Do you want the scores written to a file?** (Y / N), then type **Y** and click **Enter**.

6. Enter the name of your score file on *Enter the name of the score:* for example, F:\Advread.scr. Then click **Enter**. Finish.

To interpret the result of the calculation, the following table was the guidance for the researcher to determine the reliability, discriminating power and level of difficulty.

Table 3.3 Criteria of Test Item Quality

Prop Correct (Level of Difficulty – p)	
0.000 - 0.250	Difficult
0.251 – 0,750	Average
0.751 – 1.000	Easy
Point Biseral (Discriminating Power – D)	
0.199 -	Very low D
0.200 – 0.299	Low
0.300 – 0.399	Average
0.400	High D
Alpha (Test Item Reliability)	
0.000 – 0.400	Low
0.401 – 0.700	Average
0.071 – 1.000	High

3.1.1.2 Result of Try Out Test

Try out of reading comprehension test was done to determine the quality of test item such as level of difficulty, discriminating power and reliability. This test has been conducted on Thursday, 22nd september 2015 in the third semester of English Departement of STKIP Muhammadiyah in regular C class in which this class did not include as the sample in this research. The reason is due to the students in that class are similar level with the sample who were used in this research. Having conducted the try out test, then the researcher analyze the result of this test to determine the validity, reliability, level of difficulty, and discriminating power.

1. Validity

As stated previously, the researcher used expert judgement to measure the validity of test. In this case, he asked the experts to judge whether the instrument is valid or not. At the same time, the expert was instructed to match the theories and the indicators of reading comprehension test. Then, the indicators with all the items of the test as well. Thus, the result of the expert judgement revealed that there is positive statements from the expert (see Appendix 7). In other words, it can be said that the instrument is valid to be used as a tool for collecting the data. Further, the researcher considered the reading test instrument to be administered in both pre test and post test.

2. Reliability

The next important part which should be tested is reliability of test instrument. The researcher used IteMan program to see the reliability of the instrument. From the result of IteMan program, it was found that the reliability (Alpha) of this test was 0.746 (see Appendix 9), it was indicating that this test instrument had high reliability since it lied between 0.401-0.700. In short, this reading comprehension test instruments can be used as a tool for collecting the data of students' reading comprehension achievement since it had fulfilled the requirements of good quality test instrument.

3. Level of Difficulty

To measure the difficulty level, discriminating power and reliability, the researcher used IteMan Program. After analyzing the result of try-out through

Iteman program, the researcher found that there were 5 items which had to be dropped (6,9,10,21,38) and 40 items could be administered for both pre test and post test. They comprised of 4 revised items (12,23,32,37) and the rest or 36 items were good quality items. (see Appendix 8).

The following is the example of the item that should be dropped

9. In line 11 “eras” is closest in meaning to...
- | | |
|-------------|------------|
| a. Families | b. Periods |
| c. Herds | d. Tools |

The item should be dropped since level of difficulty is too easy (0.94) and discriminating power is very low (0.13)—see Appendix 8. It means that the item can not discriminate between high and low level students since it is too easy for the students.

Meanwhile, The result of difficulty in the try-out test consisted of 4 difficult items (6,10,21,38) which lied between 0.000-0.250 and shows that the items were difficult for the students; 9 easy items (4,9,12,19,22,25,32,40, 43) which lied between 0.751-1.000 and shows that the items were easy for students; the rest or 22 items are good items, which lied between 0.251-0.750 and shows that the items were good for students; Here are the examples of difficult, good and easy items.

The following item is the example of difficult item

10. The topic of this paragraph is
- Waiting for your company to send you to school
 - The company’s training program
 - Being lifelong learner
 - New software technology

That test item was on number 10 in the reading comprehension try-out test. Its difficulty level was 0.15, further it indicated that the item is difficult for students.

The item below is the example of good item

35. Which of the following is probably not a symptom of tapeworm investment?
- unusual eating habit
 - excitability
 - deficiency of red blood cells
 - euphoria

The item above was on number 35 in reading comprehension try-out test. Its difficulty level was 0.69, it indicates that it is good item for students.

An example of easy item can be seen in the following item

9. In line 11, “eras” is closest in meaning to.....
- | | |
|-------------|----------|
| a. families | c. herds |
| b. period | d. Tools |

That item was on number 9 in the test. Its difficulty level is 0.94, it shows that the item was easy for students.

4. Discriminating Power

For the result of discriminating power in reading comprehension try-out test, it was found that there were 4 very low item (38,21,9,6) which lied 0.119 and it indicates that the item were very low to discriminate between high and low level students; 6 low items (10,12,23,32,37,34) which lied between 0.200-0.299 and shows that the items were low and still could not discriminate between high and low level of students; and 11 high items (2,3,8,13,15,17,20,26,29,35,44) which lied 0.400 and it indicates that the items were very good to discriminate between high and low level of students; and the rest or 24 items were average items which lied between 0.300-0.399. —see Appendix 8. The example of very low and low test items are as follows.

Here is the example of very low test

6. In line 12, “nomadic” is closest meaning in to
- | | |
|--------------|--------------|
| a. sedentary | c. Primitive |
|--------------|--------------|

b. Wandering

d. Inquisitive

That test item was on number 6 in reading comprehension try-out test. Its discriminating power index is 0.10, indicating that it was very low to discriminate between low and high level of students.

Then, the following was the example of low test

32. The word “eliminated” in line 7 is closest in meaning to

a. Ingested

c. Expelled

b. Eaten

d. Grown

The item above was on number 32 in reading try-out test. Its discriminating power was 0.25, it indicates that it is low and still can not discriminate between low and high level of students.

3.3.2 Questionnaire and Interview

In exploring the second research question, the researcher distributed close-ended questionnaire. To obtain the data from all the students in experimental class, the researcher instructed them to answer all the questions about students’ preception. The questionnaire was adopted from Richards (2007) and Nation (2010) (See Appendix 4). Further, the questions was translated into Bahasa in order to avoid mis interpretation. The following table is the specification of students’ perception questionnaire.

Table 4.3. Specification Table of Students’ Perception Questionnaire

No	Objective	Aspect	Indicators	Number of Item
1	This spesification is used to assess the students’ perception about the	Students’ Perception	1. Preparation 2. Presentation 3. Method/	1,2,3 5,6,7,8,9,10 12,13,14,15,

	implementation of DBCIRC		Execution	16,17,18,19, 20
			4. Teacher-Students Interaction	22,23,24,25, 27,28,29
			5. Learners' Satisfaction	4,11,21,26, 30

Then, to strengthen the data for the second research question, the researcher conducted interview. The researcher has interviewed six students in the sample as the representers of the class with open-ended questions in order to gain the data as clear as possible. The technique for interview was semi-structured interview. Semi-structured interview was chosen, as they are more flexible and proper with the aims of the study. That's why the researcher used this type of interview. All the process of interview were recorded and transcribed to make the researcher easy in interpreting the data. During the interview, the interviewer was guided by students' perception interview guideline—(see Appendix 5). The questions of interview was translated into bahasa Indonesia to avoid miss interpretation between the interviewer and interviewees. However, the researcher will not take all the result of interview since the purpose of this interview was to support the data gathered from questionnaire. The reason is the interview can cover the data which might not be collected through questionnaire because the form of questionnaire is in form of close-ended whereas interview is in form of open-ended questions. Therefore, those data collecting techniques will support one each others.

3.4 Data Analysis

As explained previously, the data in the present research would be analyzed both quantitatively and qualitatively. Hence, to analyze the quantitative data, the researcher uses Statistical Package for Social Science (SPSS) program version 20 for windows. The data obtained from test was compared before and after treatment. The steps are describes as follows.

1. The researcher analyzed the score of pre test and post test in the control class to find the mean score
2. The researcher analyzed the score of pre test and post test in the experimental class to find out the mean score
3. The researcher compared the score of pre test and post test by using paired-sample t-test to know the differences before and after the treatment given.

The significant level () which is used is 0.05.

The hypothesis that will be tested as follows

H_a: There is difference of students' reading comprehension achievement before and after being treated by DBCIRC technique.

H_o: There is no difference of students' reading comprehension achievement before and after being treated by DBCIRC technique.

The criteria for hypothesis acceptance is that if the significant (p) value obtained through SPSS program was less than the significant level (0.05) it means that H_o is rejected. It means that there was difference achievement of students' reading comprehension before and after the treatments. In other words, it could be said that

the DBCIRC technique gave positive influence so that it could promote students' reading comprehension achievement. On the contrary, if the significant (p) value which was gained from SPSS program was greater than the significant level (0.05) it means that H_0 is accepted. Then, it could be said that there is no difference of students' reading comprehension achievement before and after the treatments. Therefore, it could be interpreted that the DBCIRC technique did not give positive influence toward students' reading comprehension achievement.

On the other hand, to analyze the data obtained from questionnaire and interview, the researcher analyzed the result of questionnaire descriptively then described it clearly to answer the second research question which deals with students' perception about the implementation of DBCIRC technique in reading class.

3.5 Research Procedure

Relying on the process of experimentation study that has been elaborated above, this research was conducted through the following procedure.

a. Conducting the tryout of instruments

Firstly, the researcher conducted the tryout of instruments of multiple-choice test. The purpose of this activity is to measure the discriminating power, level of difficulty and reliability of the test instrument. The tryout was conducted at STKIP Muhammadiyah Kotabumi. However, it would not be administered to the sample but to students who were not involved as the sample.

b. Administering pretest for both experimental and control class

Having found a good validity, reliability, discriminating power and level of difficulty of instrument, the researcher gave pretest to measure the first

achievement of students' reading comprehension. The researcher should make sure the first ability before the treatment. Therefore, the difference improvement of students' reading comprehension between pre test and post test could be seen clearly.

c. Conducting the treatments

The treatments have been given for eight meetings in experimental class. During the treatment, the researcher applied the teaching technique based on what has been planned which is DBCIRC technique. In each meeting, the materials given were different so that the students were able to enrich their new vocabulary size and enlarge their knowledge. Each of them has been designed by utilizing the digital media to trigger their willingness in following the lesson seriously.

d. Distributing questionnaire and conducting interview

Having finished the treatments, the researcher asked to students in experimental class to answer the questionnaire and interview about students' perception.

e. Administering posttest for both experimental and control class

At the end of the whole treatments, the researcher administered posttest in order to see the difference achievement of students in reading comprehension after the treatment.

V. CONCLUSIONS AND SUGGESTIONS

Referring to the data analysis, the researcher draws the following conclusions, which then would be followed by some suggestions.

5.1 Conclusions

In accordance with the results of the data analysis and the discussions of the current study, the researcher draws the following conclusions.

1. The current research focuses on reading comprehension achievement through DBCIRC technique in which this technique is the corporation between CIRC technique and digital media. The result reveals that there is difference between students reading comprehension achievement before and after being treated by DBCIRC technique. In brief, it can be concluded that DBCIRC technique can be used to promote the students' reading comprehension achievement in the third semester of the students in STKIP Muhammadiyah Kotabumi-Lampung. It might be caused by two reasons; first, the stage which provide a lot of chance for the students to read and practice in a group. Second, the utilization of digital media which can motivate the students to highly involved in the learning process since this media is suitable with their condition. Eventually, the implementation of this technique can be used to promote the students' reading achievement.
2. From the questionnaire of students' perception, it was revealed that the students' perception about the implementation of DBCIRC technique is positive. Since this is new technique for them, at the same time the process of teaching and learning ran in

the computer laboratory, so they enjoy the process and feel fun. Therefore their perception about the implementation of this technique is positive.

5.2 Suggestions

In line with the result and conclusions of the research, the researcher would like to propose some suggestions both for teachers and further researcher:

5.2.1 For the Teachers

- a. The technique used in this research was really effective to be applied in reading class. It can be seen from the improvement of the students' reading comprehension achievement after the treatments. However, the teachers of reading subject still have not used this technique for teaching reading. Hence, it was suggested for the teachers to apply this technique in reading class for its' advantages.
- b. In applying this technique, it was suggested for teachers to concern in improving each aspects in reading especially those which are difficult for students to master. Making inference, for instance. In the current research, the lowest improvement in reading happens in this aspect. So, the teacher should focus on each aspects in reading comprehension so that the improvement of each aspects is balance.

5.2.2 For Further Researcher

- a. Since the researcher modified the technique used in this research with digital media, it was suggested for further researcher to develop the similar area of research with something new for students by considering the learners' condition. So that the teaching technique in education field especially for tertiary level is developed following the development of science and technology.

b. The study limits on the utilization of digital-based cooperative integrated reading and composition to promote students' reading comprehension achievement and students' perception. Meanwhile, since this is new teaching technique especially in reading, there might be hindrances faced by the teacher in applying this technique due to several reasons such as the teacher's qualification in designing media, the facilities and so on. Therefore, it was suggested for further researcher to find out the hindrances which might happen during the implementation of DBCIRC technique.

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