THE EFFECTIVENESS OF MOODLE TO TEACH READING

VIEWED FROM THE STUDENTS' INTELLIGENCE QUOTIENT

(An Experimental Study at the First Grade Students of SMA Negeri 2 Purwokerto

in the Academic Year of 2011/2012)


A THESIS


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APPROVAL BY THE BOARD OF CONSULTANTS

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**MOTTO**

*"Life is like a chess,*
*if you don't make a move,*
*you'll lose the game!"*

("Walking on the Edge" by Scorpions)

## DEDICATION

**This thesis is dedicated to:**

My beloved husband, Rosyid Dodiyanto;

my wonderful kids, Jasmine and Esa;

my great parents, Maos' and Semarang's;

my kind-hearted sisters, Mba Etty and Gotri.

*"Unaccounted thanks for the support."*

# PRONOUNCEMENT

This is to certify that I myself write this thesis entitled "*The Effectiveness of Moodle to Teach Reading Viewed from The Students' Intelligence Quotient (An Experimental Study at the First Grade Students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012)*. It is not a plagiarism or made by others. Anything related to others' works is written in quotation, the sources of which are listed in the bibliography.

If then the pronouncement proves wrong, I am ready to accept any academic punishment, including the withdrawal or cancellation of my academic degree.

Surakarta,    November 2012

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The writer would be glad to accept any constructive criticism to make this thesis better or even perfect. Finally, hopefully this thesis gives valuable contribution for education, especially to improve students' English ability on reading comprehension skill.

The Writer,

Restuti Dwiningsih
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# ABSTRACT

Restuti Dwiningsih. *The Effectiveness of Moodle to Teach Reading Viewed from the Students' Intelligence Quotient (An Experimental Study at the First Grade Students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012)*. First Advisor: Dr. Ngadiso, M.Pd.; Second Advisor: Dr. Abdul Asib, M.Pd.. Thesis, Surakarta, English Education Department, Graduate School, Sebelas Maret University of Surakarta, 2012.

*Keywords: Moodle, Power Point, Reading, Students' Intelligence Quotient.*

This research was conducted to find out whether: (1) the use of Moodle is more effective than Power Point to teach reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012; (2) the students who have high intelligence quotient have better reading skill than those who have low intelligence quotient of the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012; and (3) there is an interaction between teaching media and students' intelligence in teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

The method applied in this research was an experimental study. It was done to the first grade students of SMA Negeri 2 Purwokerto in the academic year of 2011/2012. The cluster random sampling was used to take the samples as the experimental group and control group. Both then were classified into students having high and low intelligence. Multiple choice questions having been tried out to get the valid and reliable items were tested on them. The result were analyzed by multifactor analysis of ANOVA and Tuckey test.

Based on the result multifactor analysis of ANOVA, the findings of this research are: (1) Moodle is more effective than Power Point to teach reading; (2) students' intelligence doesn't differ significantly from one another in their effect on the reading ability of the subjects in the experiment; and (3) there is an interaction between the use of media and the students' intelligence in teaching reading.

The result of the research implies that Moodle is an effective teaching medium for teaching reading. There was a cause and effect relationship between teaching media and students' intelligence toward reading achievement. Therefore, it is good for the English teacher to use Moodle to teach reading comprehension in the classroom because it has been proved that its various and innovative features are able to increase the students' reading skill.

# CHAPTER I
# INTRODUCTION

## A. Background of the Study

Language is a tool of communication. Because human being is a social-creature that always needs to interract with others, it is very important to master a language as a tool of communication. Lado (1961: 2-3) states

> Since language is so ever present in human activity and thinking and since it flows so easily from the tongue of native speakers, it is possible on one hand to oversimplify it in our thinking and in our plans to study it……. Language is primarily an instrument of communication among human beings in a community..….. Languages differ from each other in such ways that the members of one speech community usually do not understand the speakers of other speech communities. The fact that language differ from each other is accepted as a normal state of affairs, and when the speakers of one community wish to communicate with those of another they usually study their language or find someone who knows it.

The more people master language, the better people can understand others. Besides, it is important to learn other languages in order to have wider relationship and knowledge. Because human activities are limited by the place and time, not only by speaking but people also communicate by writing.  Thus, language exists in two forms, the spoken and the written. According to Harris (1969: 9), spoken language is a form of human communication in which words are uttered through or with the mouth, whereas, written language is the representation of a language by means of a writing system.

The only way to understand the written language is by reading, a process of transferring the content of a text using human sense to the reader. Therefore, mastering reading skill is very important. At school, where the students study, reading plays so important role. To learn and then to master the lessons, students must have awareness to read a lot. Human's ability as the source is limited; therefore, they must read to get faster and further information. In language lessons, including English, reading is not only the way to get the knowledge about

the language itself but also one of the skills that must be mastered by students. It was supported by Nunan (2003: 69) saying:

> Reading is essential skill for learners of English as a second language. For most of these learners, it is the most important skill to master in order to ensure success not only in learning English, but also in learning any content subjects in where reading is required. In short, with the strengthened reading skill, learners will make greater progress and development in all other areas of learning.

These reading skills include the ability to pronounce, read, and understand a text and its content well. Moreover, reading skills are learned in order to be able to master any knowledge or science, including English as a language.

To be able to understand the content of a text, students have to master reading comprehension skill. Students have to be able to find the topic and the main idea of a text, stated/unstated information, pronoun reference, the meaning of words, the message, and communicative purpose of the text. This indeed requires continuous practices, development, and refinement.

There are many factors affect students' reading skills. Here, the creativity of the teachers is really needed to find the most suitable ones like using and optimizing the approaches, the methods, the strategies, or many other ways. The use of various media is also applied in English classes. The commonest media developed in teaching learning right now is computer. Moodle and Power Point are two of the software packages in the computer now commonly used to teach any lessons including Reading in English.

Moodle is a name of a new and interesting and challenging computer program that can be used for teaching learning media. Standing for *Modular Object-Oriented Dynamic Learning Environment* (in the early years the "M" stood for "Martin's", named after Martin Dougiamas, the original developer), it is an open source based e-learning software designed to help educators create online courses with a focus on interaction and collaborative construction of content, and is in continual evolution. This medium is so good for teaching learning because of features provided inside. Some typical features of Moodle are assignment submission, discussion forum, files download, grading, Moodle instant messages, online calendar, online news and announcement, online quiz, and Wiki. Besides,

the administrators can extend Moodle's modular construction by creating plugins for specific new functionality, like class activities, resource types, question types, and games.

By using Moodle, the teaching learning will be more interesting, challenging, and inovative so the students are hoped to be able to achieve the materials optimally. The class will be interactive because Moodle can be online and provides instant message, a feature for student-teacher instant communication. As the administrator, the teacher can create the materials related to the objectives of the teaching learning based on the syllabus. The students can do the exercises or tests with fun. They can study all by playing a game activity, doing exercises in a quiz, or practice reading comprehension through fun features inside. They will not feel ashamed when they make a mistake because mostly they face the computer. They can learn more and then redo the exercises or the tests as the teacher permit them. Then, the teacher can also take the assessment easily and automatically from the exercises done by the students through its features, not only based on the result but also based on the process.

This medium is offered here because the teaching learning process using this media can be managed in various ways. The teaching learning process is not limited by a room, but can be everywhere, indoor or outdoor, even in a distance as long as they face their computer. The teacher can ask the students to study in groups or individually. They can also concentrate maximally on their work while doing the exercises, and have interactive session when they have difficulty. They may ask the teacher in the class, discuss with their friends, open and learn more from their books or other references, and also browse the further information and knowledge through internet connection.

It is hoped that the use of this medium, Moodle, can increase the students' achievement in reading skill. The type of questions in Moodle can be adapted to the indicators the teacher wants the students to achieve. In teaching Reading, the teacher can design the type of questions based on the indicators needed such as for reading comprehension skill. Here, all indicators, like identifying topic or main idea, finding specific information, pronoun reference,

the text's message, and inference, can be arranged through multiple choice. The students can enrich their vocabulary through gap-filling and matching exercises. Moreover, as it has been explained before, the teacher as the administrator can extend the class activity including games, or type of questions based on the indicators or objectives of the class.

On the other hand, Power Point is a common medium used by a teacher in the class nowadays. It is also one of computer's software packages and interesting media for teaching learning. Power point is also suitable for teaching language, including reading skill because it provides slides showing the points of explanation for example to tell about genres of texts, supporting pictures, graphs, charts, and even hyperlinking to any files, videos, or webs. It will make the students easier to understand the topic or main idea of a text, get specific information which is stated and unstated, understand the meaning based on the context, know pronoun reference, identify the communicative purpose of the text, and catch moral value or the text message.

Teaching learning using Moodle is student centered, otherwise teaching learning using Power Point tends to be teacher centered. As Confucius (Silberman, 1996: 1), a Chinese philosopher, declared, "What I hear, I forget; What I see. I remember; What I do, I understand." It is better for the teacher to make students involved actively in the teaching learning process to give them experience. The teaching learning will be optimal if the students are involved in the activity. By using Moodle, the students have to manage themselves in studying something. They handle their own time to decide the materials they learn, the exercises they do, and how they spend the rest of the lesson. The students can have the similar materials as all presented in Moodle, but in using Power Point they tend not to be the subject, but only play as objects, of the teaching learning process. The students do not involve in operating the computer. They will not be too active, only accept the explanation given by the teacher in the class. The sources of their study are limited, those are the teacher and whatever in their surrounding.

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It cannot be neglected that the students' achievement, or the result of the assessment including reading, is also influenced by the students' intelligence. There are some students who can easily learn or understand something. Some others even learn or are taught one thing in many times, but they can't accept or understand it easily. The first students are categorized as high intelligent and the next are low intelligent. Ronis wrote in her book *Brain − Compatible Assessment* (2011: 55-56) that intelligence includes the capability of learning and applying it in the daily life. Indeed, there is correlation between IQ and what can be learned and done in this real world. Otherwise, many cognitive researchers proved that intelligence is open system and dynamic so that it can be modified in every age and ability level. It means that the students' capability can be increased even in any level intelligence of the students'. Intelligence has a powerful genetic component, but there are a number of environmental aids and hindrances; a stimulating environment, parental encouragement, good schooling, spesific reasoning skills, continued practice, and so on, certainly help a person become more intelligent. A teacher must be creative, innovative, and able to understand the students' condition, and apply the suitable ways influencing the students' competence or achievement effectively.

## B. Problem Identification

Based on the background of the study above, it can be seen that there are several problems arising, as the following:

1. Why do the students still have low reading comprehension skill?
2. Why have the students not been able to achieve reading skills maximally?
3. What factors cause the students' low reading comprehension skill?
4. Does student's Intelligence influence the student's reading skill?
5. What media is effective to teach reading related to students' Intelligence Quotient?
6. Is Moodle effective to teach reading for the students having high Intelligence Quotient?
7. Is Power Point effective to teach reading for the students having low Intelligence Quotient?

**C. Problem Limitation**

This research focuses on the students' reading skill, their reading achievement, and the problems on them. Here, media is chosen to solve the problems and improve the students' reading skill. This research would like to find out the influence of student's intelligence to the student's reading skill, and the effectiveness of using Moodle compared to other media that is using Power Point to teach reading. This thesis doesn't talk anything out of those all about.

**D. Problem Formulation**

The problems that this research will try to solve are:

1. Is using Moodle more effective than using Power Point to teach reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012?

2. Do the students who have high intelligence quotient have better reading skill than those who have low intelligence quotient of the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012?

3. Is there an interaction between teaching media and students' intelligence in teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012?

**E. Objectives of the Research**

This research is aimed at finding out the influence of teaching learning media and the student's intelligence quotient. This research is particularly proposed to know whether or not: (1) using Moodle is more effective than using Power Point to teach reading; (2) the students who have high intelligence quotient have better reading skill than those who have low intelligence quotient; and (3) there is an interaction between teaching media and students' intelligence in teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

## F. The Benefits of the Study

This research is done with a hope that the result will be able to bring goodness for the teacher, the students, the researcher, and also other researchers.

1. For the Teachers

Based on the result of this research, the teachers can consider the use of suitable media based on the student's personal background, especially student's intelligence quotient. If student's intelligence plays an important role for the student's reading skill, it becomes something important to think about. The students' intelligence cannot be neglected during the teaching learning process to support the student's skill, especially on the student's reading skill. If there is an interaction, it is necessary to consider the use of Moodle and Power Point based on the students' intelligence quotient.

2. For the Students

The result of this research will give the students options, the suitable media, for themselves. They will get information about Moodle and Power Point for their learning media especially on reading. By choosing the right medium, they will love reading and practice it. They will improve their reading skill. In consequence, it will also help them in gaining better achievement in their study.

3. For the Researcher

This research gives the researcher an understanding how to use Moodle and Power Point in teaching reading for the students having high and low intelligence. Using these media in teaching reading hopefully will provide useful practical experience for the researcher herself.

4. For Other Researchers

The result of this research is expected to be able to be good reference giving enough information for the next researchers, especially who want to investigate more about the media used to teach reading effectively.

**CHAPTER II**

**LITERARY REVIEW**

**A. Reading**

**1. Definition of Reading**

Reading is one of language skills that is very important to be mastered in order to get wider information or knowledge through the written language. It is a process of transferring the content of a text, using human sense, to the reader. Snow (2002: 11) defines reading as the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. Rayner (1989: 23) also declares that reading is the ability to extract visual information from the page and comprehend the meaning of the text. It is also stated by Harris and Hodge (Fresch, 2008: 83) that reading is the construction of meaning of a writer communication through a resiprocal, holistic interchange of idea between the intepreter and the message in a particular context. According to William (1996: 3), reading is a process whereby one looks at and understands what has been written, the reader does not necessarily need to look at everything in a given piece of written. The reader is not simply a passive object, fed with letters, words, and sentences, but is actively working on the text, and is able to arrive at understanding without looking at every letter and word. It is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated.

Based on the theories above, it can be concluded that reading is a process of transferring the content of a text, simultaneously extracting and constructing meaning through interaction and involvement with written language. It is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated. Therefore, it is important to study, and then master the reading skill.

**2. The Nature of Reading**

Reading is a process of understanding the written text. According to Harris (1969: 59), the abilities needed in reading a language include at least:

a. Language and graphic symbols

   1) Comprehending a large percentage of the lexical items occuring in nonspecialized writing and being able to derive the meaning of unfamiliar items (or special uses of common items) from the contexts in which they occur

   2) Understanding the syntactical patterns and morphological forms characteristic of the written language and following the longer and more involved streches of language (sentences and sequences of sentences) occuring in formal writing

   3) Responding correctly to the graphic symbols of writing (e.g., punctuation, capitalization, paragraphing, italizing) used to convey and clarify meaning.

b. Ideas

   1) Identifying the writer's purpose and central idea

   2) Understanding the subordinate ideas which support the thesis

   3) Drawing correct conclusions and valid inferences from what is given

c. Tone and style

   1) Recognizing the author's attitude toward the subject and the reader, understanding the tone of the writing

   2) Identifying the methods and stylistic devices by which the author conveys his ideas.

In practice, the above abilities are mutually dependent. A writer may, for example, elect to use humor to make the reader aware of some common human failing, conveying the ludicrousness of this human behaviour by an usual selection of lexical items. The good reader, then, is one who can respond simultaneously-and appropriately-to the language, ideas, and stylistics of mature writing, and, moreover, can achieve these understandings with reasonable speed and fluency.

Nunan (1991: 63) outlines that there are two different views on the nature of reading: the bottom-up view, which suggests that successful reading is a matter

of decoding the individual symbols or letters we read to derive the meaning of words and thense utterance; and the top-down view, which suggests that we use discoursal and real-world knowledge to construct and interpret visual messages.

The central notion behind the bottom-up approach is that reading is basically a matter of decoding a series of writen symbols into their aural equivalents. Cambourne in Nunan (1991: 63-64), who uses the term 'outside-in' rather than bottom-up, provides the following illustration of how the process is supposed to work:

Print ⟶ Every letter ⟶ Phonemes and graphemes ⟶ Blending ⟶ Pronunciation ⟶ Meaning
discriminated            matched

According to this model, the reader processes each letter as it is encountered. These letters, or graphemes, are matched with the phonemes of the language. These phonemes, the minimal units of meaning in the sound system of the language, are blended together to form words. The derivation of meaning is thus the end process in which the language is translated from one form of symbolic representation to another.

Insights from sources such as the Reading Miscue Inventory led to the postulation of an alternative to the bottom-up, phonics approach. This has become known as the top-down or psycholinguistic approach to reading. As with the bottom-up models, there are a number of variations in this approach, but basically all agree that the reader rather than the text is at the heart of the reading process. Cambourne in Nunan (1991: 65-66) provides the following schematisation of the approach.

Past experience, language ⟶ Selective aspects ⟶ Meaning ⟶ Sound, pronunciation
Intuitions and expectation       of print                          if necessary

From the diagram, it can be seen that this approach emphasizes the reconstruction of meaning rather than the decoding of form. The interaction of the reader and the text is central to the process, and the readers bring to this interaction their knowledge of the subject at hand, knowledge of and expectations about how language works, motivation, interest and attitudes towards the content of the text. Rather than decoding each symbol, or even every word, the reader forms hypotheses about text elements and then 'samples' the text to determine whether or not the hypotheses are correct.

**3. Elements and Skills of Reading**

It is written in *Standar Kompetensi* (National Education Department, 2003: 15-16) that the reading competence that has to be mastered in English lesson for high schools is understanding the various interpersonal, ideational, and textual meaning of written text with its certain communicative purpose, text structure, and linguistic features.

A good reading skill requires many components. Bermuister (1974: 83) states that the indicators are such as understanding reference in the reading text, understanding the main idea, understanding kinds of paragraph development, understanding the message of the story, understanding the topic sentence, understanding the tone (of emotion) of the text, understanding vocabulary, understanding logical inference, distinguishing between general idea and topic sentence, making accurate prediction, making restatement, and understanding grammar. Then, Lado (1977: 223) states that reading in a foreign language consists of gasping meaning in that language through its written representation. This definition is intended to emphasize two essential elements in such reading: the language itself and the graphic symbolization used to represent it. Heaton (1998: 105) adds that there are some specific skills involved in reading. These can be defined as the ability to:

a. recognize words and word groups, associating sounds with their corresponding graphic symbols;

b. deduce the meaning of words by

 1) understanding word formation (roots, affixation, derivation, and compounding)

 2) contextual clues

c. understand explicitly stated information

d. understand relations within the sentences, especially

 1) elements of sentence structure

 2) negation

 3) fronting and theme

 4) complex embedding

e. understand relations between parts of a text through both lexical devices (e.g. repetition, synonyms, antithesis) and grammatical cohesive devices, especially anaphoric and chataphoric reference and connectives;

f. perceive temporal and spatial relationships, and also sequences of ideas;

g. understand conceptual meaning, especially

    1) quantity and amount

    2) definiteness and indefiniteness

    3) comparison and degree

    4) means and instrument

    5) cause, result, purpose, reason, condition, addition, contrast, concession;

h. anticipate and predict what will come next in the text;

i. identify the main idea and other salient features in a text;

j. generalize and draw conclusions;

k. understand information not explicitly stated by

    1) making inferences (i.e. reading between the lines)

    2) understanding figurative language;

l. skim and scan (looking for the general meaning and reading for specific information);

m. read critically;

n. adopt a flexible approach and vary reading strategies according to the type of material being read and the purpose for which it is being read.

No mention has been made here of reading aloud, since this particular skill is unique in that it involves different skills from silent reading.

Heaton (1998: 106-133) adds that two different kinds of complementary reading activities to which students are usually exposed are generally classified as intensive and extensive reading. Short reading extracts of a moderate degree of difficulty and containing features which merit detailed study form a basis for intensive reading practice. Whole articles, chapters, and books (usually simplified readers) are used for extensive reading practice; in this case, however, the material selected is generally slightly below the language attaintment level of the students using it. Further, he also denotes the skills involved in reading quickly, skimming

and scanning. Skimming is the method of glancing through a text in order to become familiar with the gist of the content while scanning refers to the skills used when reading in order to locate specific information.

**4. The Purposes of Reading**

Reading is a bridge to get any pleasure, information, and knowledge we want or we need. A student can learn anything by reading. Reading is not only looking at or pronouncing the list of words in a written text but also thinking, and moreover, understanding the content of it for many purposes. In *A Practical Handbook of Language Teaching*, it is stated:

> The other purposes can be reading for pleasure such as reading a novel, reading for getting information such as reading newspaper, reading for getting knowledge such as reading secondary book or journal, and the last reading for curiosity such as reading a guide book (Cross, 1995: 255).

By reading, we understand the content and get the information or knowledge inside. Similarly, Lado (1977: 228) also states a couple of reading purposes as it is written in his book *Language Testing*

> And since there are various purposes in reading – reading for literary appreciation, for specific items of information, for significant information in a given field, for examples of usage, etc. – we further define reading in a foreign language as the grasping of the full linguistics meaning of what is read in subjects within the common experience of the culture of which the language is a central part.

From the statement above, it can be generalized that reading may be for either getting pleasure or getting information and knowledge.

**5. Teaching Reading**

There are many ways, approaches, methods, techniques, or stages a teacher can do to teach reading. Richards in Nunan (1991: 76) concludes that the following principles capture the essence of effective instruction.

a. Instructional objectives are used to guide and organize the lesson.

b. The teacher has a comprehensive theory of the nature of reading on a second language, and refers to this in planning his teaching.

c. Class-time is used for learning.

d. Instructional activities have a teaching rather than a testing focus.

e. Lessons have a clear structure.

f. A variety of different reading activities are used during each lesson.

g. Classroom activities give students opportunities to get feedback on their reading performance.

h. Instructional activities relate to real-world reading purposes.

i. Instruction is learner focused.

Nunan (1991: 76-78) then gives the example of technique which can be used to teach reading. They are:

a. Pre-reading task

b. Classroom extract: a reading lesson

1) Activity 1: Reading for understanding

2) Activity 2: Reading for fluency

3) Activity 3: Vocabulary exercise

4) Activity 4: extensive reading

c. Pre-reading task

d. Classroom extract 2: Reading for factual information

e. Post-reading task.

According to Watkins (2005: 60), the typical stages that may be used in a reading lesson can be summarized as building interest, pre-teaching vocabulary (if necessary), setting a gist or scanning task, learners read, learners compare answers, learners check answers with the teacher, setting an intensive reading task, learners read, learners compare answers, learners check answers with the teacher, and setting an extension activity. Further, Watkins (2005: 110) provides the example of planning and lesson plan as mentioned in Table 2.1.

Table 2.1. The Example of Lesson Plan

| Reading – 50 minutes (the reading text for this lesson is reproduced on page 140) | | Pre-intermediate level Aim: Learners practice reading for gist and specific information | |
|---|---|---|---|
| Stage/Time | Activity | Interaction | Rationale |
| 0-5 Building interest | Teacher asks learners which animals make the best pets. | t-sts | To introduce the theme of the text and create interest in the text |

| 5-12 Vocabulary focus | Teacher elicits/teaches essential vocabulary blaze, cat flap, nominate, gutted, and writes it on the board | t-sts sts-t | To make the text easier to understand for the learners |
|---|---|---|---|
| 13-20 prediction | Learners work in groups to predict content of story from vocabulary and headline. | Sts-sts | To practice vocabulary and help with understanding the text by thinking in advance of content |
| | Learners report their predictions to the class | Sts-sts | To set up following activity |
| 21-24 Gist reading | Learners read (max 2') to see whose prediction was closest to the story | St-text | Pre-set task creates a reason to read the text. Time limit creates the need to read quickly and therefore practice gist reading |
| | Learners compare answers in pairs | St-st | To build confidence |
| | Teacher checks answers. | t-sts | To ensure answers are correct |
| 25-35 Intensive reading | Teacher gives out intensive reading questions. Checks learners understand questions. | t-sts | Pre-set task creates a reason to read the text. |
| | Learners read and answer questions. | st-text | |
| | Learners compare answers in pairs. | st-st | To build confidence |
| | Teacher checks answers. | t-sts | To ensure answers are correct |
| 36-45 Extension activity | Learners work in groups to discuss the advantages and disadvantages of keeping pets | Sts-sts | To provide speaking/listening practice in the context of the text |
| 46-50 feedback | Learners report their discussions | Sts-sts | To highlight the communicative value of the speaking |
| | Teacher highlights good examples of language used and also some mistakes | t-sts | To help learners improve and learn from mistakes |

Watkins (2005: 110)

The lesson plan used in this research was composed and modified based on theories and the examples of lesson plan above.

Referring to the theories and explanation about reading discussed above, it can be concluded that reading skill is the elements of ability or competence which must be mastered by a reader, here means student, to be able to understand or comprehend a text. After the teaching learning process in the reading class, the students must be able to find topic or main idea, get specific information which is stated and unstated, understand the meaning based on the context, know pronoun reference, identify the communicative purpose of the text, and catch moral value or the text message.

## B. Media in Language Teaching Learning

Media is everything, an equipment, used to do an activity. It is used to make the activity run well and successful based on its objectives. Arsyad (1997:3) explains that the word media comes from Latin Language, *medius*, which means

middle, connector, or messenger. Further, Smaldino (2003: 9) defines the media as means of communication and source of information.

> Derived from the Latin word meaning "between" the term refers to anything that carries information between a source and a receiver. Examples include video, television, diagram, printed materials, computer programs, and instructors. The purpose of media is to facilitate communication and learning.

Next, Fleming often uses the term mediator as the cause or the tool involved in two sides and reconciliate them. With this term, a medium shows the function to arrange the effective relationship two main sides of teaching learning process, those are the students and lessons. In short, media are aids for transferring or delivering the messages of teaching learning process. Therefore, media are very important to be used in order to help the teacher transfer the knowledge to the students. To get the optimal result, a teacher has to be able to choose and use the media which are suitable with the students, also the situation and condition of the class.

Nowadays, computer as one of media provider is so familiar to be used in the class. It can help teaching learning process much because of its multifunction. Dolleton (2011:1) states that

> With the advent of modern technology, computers are used to communicate information to students in a timesaving way, to teach critical thinking and problem solving, to provide simulation to reality and to educate from a distance.

As it is written in *Strategies for Effective Teaching* (Orstein and Lasley, 2000: 278), computers can be used in three fundamental learning phases, they are acquisition, transformation, and evaluation.

a. Acquisition

Students can use computers to access information from three main kinds of sources:

1) Information utilities. Information such as news, weather, sports, and stock market trends can be obtained through retrieval services.

2) Databanks and web sites. Students can access current information and opinions about reports, studies, and demographic trends using sources available on the internet.

3) Computerized books. Entire books are stored in electronic form or on computer disks. CD-ROMs-which combine graphics, pictures, and print- can create dynamic, real world representations missing from conventional printed books.

b.  Transformation

Learning can be tailor-made or individualized. Self-contained units or modules have been developed and are available to students to be used as instructional supplements or as self-contained programs. Interactive computer materials are also available through computerized video lessons that present the topic and guide the student through a series of exercises to test knowledge, understanding, and application of skills and concepts. Both approaches allow students to move at their own pace through the lesson.

c.  Evaluation

Students can evaluate their learning meaningfully because the computer gives them rapid and accurate feedback. The computer can be programmed to respond to virtually any response the student makes. The computer can tell the student not only whether an answer is correct or incorrect, but also what information to review. With simulations, new kinds of responses can be tried with immediate evaluation and feedback. In short, with computers, students can evaluate their own learning by receiving essential information about their responses.

Current computer technology has greater potential for enhancing the instructional and learning processes today. Orstein and Lasley (2000: 274) state

> Computer technology for school purposes has been available since the 1950s, but in the last decade computers have begun to have major impact on classrooms and schools. In 1980 some 50,000 microcomputers were used in 15 percent of the nation's schools. In 1995 there were more than 2.5 million computers in use in nearly 99 percent of the schools. And by 1998, as a result of the Goals 2000: Educating America Act passed by Congress in March 1994, schools across our nation were spending billions of federal dollars on computers, software, and related services as

well as teacher training, in an attempt to integrate technology with teaching and learning.

By using computer, the teacher is not the only source for the teaching learning anymore. The students can learn anything wider and faster through the computer and its connection to internet. According to Branson (1991) in McKeachie (1994: 183), this is nothing less than a new paradigm for education. The teacher is no longer at the center. The center is occupied by accumulated knowledge and experience, to which students have direct access. Students learn not only by following the teacher; they learn along with the teacher and by interacting with one another. Indeed, students are bound to learn much that the teacher does not know. Computer-based media make possible a rich array of learning tools. Textual, numerical, and graphical sources of great variety are literally at our fingertips.

In teaching language, computer is also common to be used. Watkins (2005: 24) supports the use of computer in an English class by saying

> Computers can be used for a variety of purposes in English language teaching. The internet is a good source of material for both students and teachers. There are also many software packages that can be used for learning and teaching.

There are so many computer software packages providing attractive and challenging programs to be used for English language teaching and learning process. Moodle and Power Point are two of them, which are chosen to be used in this research.

## C. Moodle

### 1. Moodle Software Package

Moodle is a name of a computer software that can be used for teaching learning media. Standing for Modular Object-Oriented Dynamic Learning Environment, it is a free source e-learning software platform, also known as a Course Management System, Learning Management System, or Virtual Learning Environment (VLE). Moodle was originally developed by Martin Dougiamas in August 2002 to help educators create online courses with a focus on interaction and collaborative construction of content, and is in continual evolution. Moodle

has several features considered typical of an e-learning platform, plus some original innovations (like its filtering system). Moodle can be used in many types of environments such as in education, training and development, and business settings. Some typical features of Moodle are:

- Course, that is feature where the teacher can save the materials, modules, or other that will be used for teaching learning process.
- Assignment, that is a feature that can be used to give online assignment for the students. The students can access the materials and then submit it by sending the file of their work.
- Discussion forum, that is feature that provides the possibility for having interactive class. The students can have discussion with the teacher or their friends. It is also including chat, a forum for online discussion.
- Files download, that is a feature to open outsources by an internet connection.
- Grading, that is a feature to classify the materials for specific grade, basic competence, time schedule, and so on based on syllabus or curriculum.
- Moodle instant messages, that is a feature to send or save a message, so the discussion can be done everywhere and every time.
- Online calendar
- Online news and announcement (College and course level)
- Online quiz, that is a feature which can be used to evaluate the teaching learning process and get the students achievement.
- Wiki, a feature for browsing any information and knowledge.

About Moodle for teaching learning, Rice (2011: 9-10) states that Moodle enables you to add five kinds of static course material. This is course material that a student reads, but does not interact with a text page, a web page, a link to anything on the Web (including material on your Moodle site), a view into one of the course's directories, and a label that displays any text or image. However, Moodle also enables you to add six types of interactive course material. This is course material that a student interacts with, by answering questions, entering text, or uploading files: Assignment (uploading files to be reviewed by the teacher and/or students), Choice (a single question), Journal (an online journal), Lesson (a

conditional, branching activity), Quiz (an online test), and Survey (with results available to the teacher and/or students). Moodle also offers five kinds of activities where students interact with each other. These are used to create social course material: Chat (live online chat between students), Forum (you can choose the number of online bulletin boards for each course), Glossary (students and/or teachers can contribute terms to site-wide glossaries), Wiki (Wikis can be inserted into courses, or a Wiki can be the entire course), and Workshop (workshops support collaborative, graded efforts among students).

Developers can extend Moodle's modular construction by creating plugins for specific new functionality. Moodle's infrastructure supports many types of plug-ins: activities (including word and math games), resource types, question types (multiple choice, true and false, fill in the blank, etc), data field types (for the database activity), graphical themes, authentication methods (can require username and password accessibility), enrollment methods, and content filters. Many freely-available third-party Moodle plugins make use of this infrastructure. Moodle users can use PHP to write and contribute new modules. Moodle's development has been assisted by the work of open source programmers. This has contributed towards its rapid development and rapid bug fixes. By default Moodle includes the TCPDF library that allows the generation of PDF documents from pages.

The variation of activities and question types that can be designed by the teacher as the administrator makes it challenging, interesting, and suitable for learning reading comprehension skills. The type of questions in Moodle can be adapted to the indicators the teacher wants the students to achieve. The teachers use Moodle quizzes to test grammar points or vocabulary. You can integrate images and audio files within the Moodle quiz question. Moodle quizzes offer the following question types: multiple choice, true / false, short answer, numerical questions, matching, description, short answer matching, embedded answer (drag-and-drop). Here, all indicators, like identifying topic or main idea, finding specific information, pronoun reference, the text's message, and inference, can be arranged through multiple choice. The students can enrich their vocabulary

through gap-filling and matching exercises. Moreover, as it has been explained before, the teacher as the administrator can extend the class activity including games, or type of questions based on the indicators or objectives of the class.

Therefore, in the class a teacher as the administrator and the developer at once can fill in the materials, the class activity, the exercises and all contents of the Moodle that are suitable with the objectives of the teaching learning process or the topic that will be disscussed in the class. After that the students can learn them all by choosing the exercises in the online classroom. The exercises can be centraled under the control of the teacher.

**2. The Advantage of Moodle**

The teaching learning using Moodle has many advantages. First, the teacher can be more creative in creating supporting media for teaching reading. Martinez and Jagannathan (2008) highlight its important advantages, they are lower total cost for ownership, higher levels of security, peer review, greater flexibility, ability to customize by modifying code, audit ability and code availability, technical support, well-tested updates and plug-ins, variety of capabilities and tools. It has the large user community that fosters review, quality, reliability, accuracy, accountability, collaboration, and greater communication. Moodle users find that the breadth of talented people available is so great, that they can communicate with a developer or download a patch at any time of day, anywhere. Moodle is helping the education world set, follow, and maintain standards. Moodle developers are leading the way in e-Learning technology innovation because they can work as a community with common interests, and foster collaboration in the pursuit of knowledge sharing and rapid development. Besides, Moodle is available in many languages, thereby greatly increasing the reach of the LMS to educators everywhere. Anyone (students and teachers alike), can choose to view a Moodle site in a different language simply by selecting the language from drop-down menu on the upper-right corner of the screen. Educators can easily enhance learning based on local preferences. Note however, that Moodle does not translate the content itself. Any user-generated content remains in the language it was entered in.

A teacher as the administrator and the developer can fill in the program with the suitable materials given to the students based on the objectives of the teaching learning or the syllabus. There many advantages in using Moodle as an e-learning application, one of them is it has strong safety because the teacher is the administrator of the website designing and managing everything inside, the teacher is the developer who is the one who can change the materials, the class activity, the assignment, etc. for teaching learning, and the teacher is the manager who decides the students to visit it.

The teacher can design a class evaluation to control the students' achievement through various kinds of assignment, activity with its games, quiz, and even questions provided in the features. Moreover, the types of questions such as multiple choice, true and false, fill-in-the blanks, and other possible types like matching, structured essay, and so on, are supporting the teaching learning to improve the reading comprehension skills. Heaton (1998: 107) states

> Indeed, there are numerous ways of testing reading comprehension, ranging from multiple-choice items to open-ended questions (i.e. questions which require students to write an answer in a sentence of their own). Although multiple-choice items are the most suitable instruments for testing reading comprehension, they should not be over-used. Frequently, other item types are far more interesting and useful. The text itself should always determine the types of questions which are constructed. Certain texts may lend themselves to multiple-choice items, others to true/false items, others to matching items, others to re-arrangement items, others to ordinary completion items, others to the completion of information in tables, and yet others to open-ended questions. Sometimes the same text will demand at least two or three different types of items.

Because these instruments can be accessed both of off and on line, they will be more interesting, challenging, and enjoyable. The students can practice reading comprehension with fun.

Then, the teacher can monitor easily and fast the progress of the students' achievement through the result of each test automatically gotten in short time after the students do it through its feature Quiz. The various types of the questions in the quiz also make the student can do the test or evaluation in relax,

interesting, and challenging situation. The result of the students' work can also analyzed automatically through its feature. Berggren (2006: 13) states that:

> The Moodle offers a dynamically growing number of what is called 'activity modules' that support a variety of forms of both 'synchronous' and 'asynchronous' communication. ...... You can use these activity modules to design the learning processes and thereby try to realise your teaching strategy ...... There are such activity modules suitable for e.g.
> - gathering the learner data and logging the learner activities you need for diagnose
> - monitoring, moderating, and supporting your learners interaction with the CMS and with the content of learning
> - formative and summative evaluation of learning processes.

For the students, the class will be more enjoyable. All the students involve in the activity of the class by operating individually the computer faced by each of them. It is said by Watkins (2005: 9)

> Another feature of learning is that it seems to be more effective the more the learners are involved in the process. A teacher can tell learners about a language and its systems. That is to say, that teachers can try to transfer their knowledge to the learners. However, research suggests that the more that learners are involved in working out patterns for themselves, the better those patterns will be learned. So an alternative approach is for teachers to provide examples, ask appropriate questions and try to guide learners to discover things for themselves.

It can raise their self-confidence and motivation to study repeatedly. They can redo their exercise as they like without being ashamed others will know their mistakes or their result. Because the teacher has already set the answers of the exercises, after the computer get and match the data of the students' work, directly they will also know the mistake, learn it, and never do the same. They can practice it everywhere and anytime with their own computer or laptop. They can also discuss anything with their friends or the teacher during the practice through the interactive forums provided in this Moodle software package.

## 3. The Disadvantage of Moodle

There are few disadvantages of using Moodle in teaching learning. Williams, Clegg and Dulaney in Andrews and Daly (2012) add:

> While the advantages of open source software can be seen as attractive there are also well recognised disadvantages of open source tools. These include:

- 'Hidden' costs such as training, implementation, etc
- Limited service and support
- Difficulties identifying the latest version of the software
- 'A work in progress'
- Lack of access to training

Then, in a discussion, Hinkelman states:

> I love Moodle, but it is good to admit weaknesses as it will make the program and the movement stronger. Here are some that come to mind. Some are not a problem with Moodle but of education or all LMSs as a whole:
>
> - Social networking: capacity for forming learner groups and friendship groups informally. Most learning happens informally.
> - Exchange of content: It is difficult to share activities and content between teachers.
> - Ease of use: some parts of Moodle are very easy to use and some are very hard to use.
> - Viewing, sharing, commenting on student projects: not so easy. It is easier to do forum discussions or quizzes.
> - Face-to-face learning: the physical classroom and its tasks need more integration with an LMS.

Besides, it cannot be done without facing computer or laptop, and it is not a cheap thing. Therefore, not all of students have it and can practice the exercises outside of computer laboratory at school. Equipping lecture rooms with the technology is becoming increasingly common but it is still a problem for many.

**4. Teaching Reading Using Moodle**

Moodle is the aid used to help the process of teaching learning in this research so that it doesn't influence it very much. The thing hoped to change is the students' achievement in reading skill after the treatment. The students should do the following steps in using Moodle in their learning:

> All of the tools and activities in LMS are able to be configured in many ways by your instructor such as time limits and number of attempts allowed. Make sure you always read and understand the instructions provided by your teaching staff (Unit Coordinators, Lecturers, Tutors etc.) when attempting quizzes, discussion forums and submitting assignments in LMS. Forums, Quizzes. and Assignments are some of the most commonly used activities in LMS, so have a practice using Discussion Forum, Quiz, and Assignment. There are many different configurations that your instructor could choose for all of the activities in LMS. These activities are collaborative and can be used in very different ways in different units. Ensure you have read and understood any

instructions provided by your instructor in using the tools and activities in your units. Glossary, Database, and Wiki are just a few more examples for you to play with and contribute to.

(The University of Western Australia, n.d.)

The steps of teaching reading using Moodle in this research was modified as follows. Basically, the stages are opening, classroom extract, and closing.

a. Opening

   1) Greeting

   2) Checking the students' attendence or absence

   3) Stating the objectives of the teaching learning

   4) Discussing the benefit of the teaching learning

b. Classroom extract

   1) Pre-Reading

      a) Registering to Moodle

      b) Setting the Moodle

      c) Selecting the class activity provided in the Moodle, then following the steps in the class activity

      d) Building interest: asking and answering questions related to the topic, digging up what the students know about the topic

   2) Gist-Reading

      a) Studying the texts in the module provided in Moodle course; the genre, generic structure, language features and all about the texts

      b) Studying the vocabulary used in the texts

      c) Checking their reading comprehension skills through Moodle quizzes

      d) Sharing the discussed topic with friends and the teacher via chat forum, message module, journal module, feedback module in Moodle or via direct answer-question in the class

      e) Opening other sources (sites, web, and so on) through internet

      f) Doing the Moodle quizzes for intensive reading

      g) Discussing the answers

   3) Post-Reading

      a) Drawing conclusion

  b) Doing exercises in Moodle assignment for extensive reading

c. Closing

  1) Giving summary

  2) Interactive session, the time for students to ask a question

  3) Reflecting the teaching learning

  4) Saying goodbye

Along the discussion, the students can have a chat or share the topic with the teacher or their friends through the feature of message, chat, or forum. If they have a problem they can consult to the teacher through these features too, or they can open the course containing the related materials directly.

**D. Power Point**

**1. Power Point Software Package**

Power Point is a common media used by a teacher in the class. Power Point is also one of computer's software packages, as it is stated by Enterprise (2011: 1) that MS Power Point is computer software used for presentation. This software can also be used to share the ideas, opinion, argumentation, and data through the slides of presentations provided inside. Then, using special tool named Over Head Projector (OHP) or InFocus, the slides are projected and showed on the wall or special screen. Therefore, all the contents or materials presented in the slides can be seen and learnt by the audience, here are students in the class, in a big clear size.

It contains of various features. It is able to insert picture, graphics, texts with special effects, symbols, and other objects (Enterprise, 2011: 4). It can also make the presentation more interesting by filling materials into slides adding by objects like texts, picture, clip arts, graphics, shapes, or other objects (Jubilee Enterprise, 2011: 31). Even, it provides a hyperlink from the presentation to other files, video, animation or other multimedia needed during the presentation.

**2. The Advantage of Power Point**

According to Jones (2003) in his essay, there are some good reasons to use Power Point, they are:

a. Appropriate use of PowerPoint can enhance the teaching and learning experience for both staff and students

b. It provides encouragement and support to staff by facilitating the structuring of a presentation in a professional manner. The templates provided have been designed to default to good presentation criteria such as the number of lines of information per slide and appropriate font sizes and types, etc: using the styles of the default templates can significantly improve the clarity and structuring of a presentation. This helps to avoid the common use of excessive text often found on overhead transparencies.

c. By careful mixing of media, a presentation can appeal to a number of different learning styles and be made more stimulating. You are encouraged to incorporate more sophisticated visual and auditory media into presentations although care is required because of the inevitable increase in file sizes and the danger of excessive use. Incorporation can be done, either directly from within the programme or, sometimes more successfully, by appropriate pausing of the Power Point presentation and using alternative technology (e.g. tape player or VCR). Note that this does not require switching off either the computer system or the projector system, one of the most common perceptions that restrict use – instead, use the 'B' character toggle switch during a slide presentation to 'blank' the screen temporarily while using other media.

d. The electronic file format allows distribution and modification for/by students unable to be present or who have impaired visual or auditory difficulties. Power Point comes with a free viewer programme that can be distributed with the files so that the reader is not required to have PowerPoint on their personal system. However, if they do have it, they are able to perform a greater variety of manipulations on the PowerPoint file provided, such as editing the text, etc before printing it out. Most Virtual Learning Environments (VLEs) are now capable of including PowerPoint presentations if required.

e. Editing of each PowerPoint file is very easy with minimal associated reprinting costs. This ease and potential immediacy of revision facilitates reflection upon, and evolution of, teaching materials by staff whilst minimizing the

consequences of any revision in terms of either workload or time. This was a major reason for my own extensive switch of teaching materials to PowerPoint, even when the end-product was required to be an overhead projection slide. I also find that I can add a new slide whilst in a lecture if so required: I often use this method to present notices or create a record of the outcome when collecting information from the class so that it can subsequently be made available to the entire class.

f. The printing of handouts in a variety of formats is facilitated with a number of embedded options to print either the slides themselves (useful if there are graphics involved) or the text from the slides (outlines). The outlines may be saved as .rtf format and opened for further modification within an appropriate word processor. This allows the easy development of more sophisticated handouts based on the PowerPoint presentation but with extra interactive elements such as readings and questions added where appropriate.

g. Extra information can be 'hidden' within files for answering predicted questions or for providing feedback to students using the file in a distance learning context. The use of speakers notes as an automated feedback system was described by Mottley (2003) who also describes other ways to use PowerPoint for development of self-study materials

h. The portability of the files, especially on compact disks (CDs) with their large capacity, allows presentations to be given wherever the technology is available or distributed where appropriate. Presentations can also be set up to run automatically if required e.g. as demonstrations/instructions within a laboratory

Power point is also suitable for teaching language, including reading skill because it provides slides showing the points of explanation for example to tell about genres of texts, supporting pictures, graphs, charts, and even hyperlinking to any files, videos, or webs. It will make the students easier to understand the topic or main idea of a text, get specific information which is stated and unstated, understand the meaning based on the context, know pronoun reference, identify the communicative purpose of the text, and catch moral value

or the text message. Using it for enriching students vocabulary, Sperling (2012) in Dave's ESL Café states

> Powerpoint helps if you play to its strengths. For example, if you are teaching vocabulary, Powerpoint allows you to project images onto the board and this enables visual learning. (Most textbooks would love to be full of glossy pictures, but there are space and copyright constraints.)
> The other thing is that once you have collected your materials on Powerpoint, it is easily reusable.

Further, Simpson (2009) says that PowerPoint presentations can be used in many ways in ELT. For example, presentations can be used for presenting language structures, for practice and drilling, or for reviews.

Using Power Point also has benefits, like: (1) it is easier for the teacher to manage the class, because all the activities are teacher's centered; and (2) the class will not have useless time, and tend to be on time.

### 3. The Disadvantage of Power Point

Jones (2003) in his essay states the common barriers to Power Point use. There may be a shortage of the key technological elements required, namely computers, the PowerPoint programme, and the delivery technology, particularly the computer projector system. There are, of course, several risk factors associated with using the technology that make some reluctant to commit to its use, the main ones being:

a. Equipment failure: refusal of any component of the system to work as expected. Bulb failure in the projector is rare but possible. The solution here is to have alternative activities, etc prepared.

b. File corruption caused by magnetic or physical damage so that the presentation will not run. Best countered by having alternative media files available. CDs are a fairly robust medium, unaffected by magnetic fields, etc.

c. Incompatible media: arriving and finding your files are incompatible with the system available. Best solution is to be aware of the systems you plan to use or carry your own laptop.

d. Lack of appropriate training in both the programme and the technology. This is a significant problem in many institutes but is beyond the topic of this paper. I

favour departmentally-orientated staff development activities where both seminars and hands-on sessions can be very successful.

The other disadvantages of the use of Power Point are: (1) the class tends to be boring because the students do not involve directly into the activities, only listen to the teacher's explanation; (2) because it is teacher-centered, the students' mastery on the materials tends to depend on the teacher's mastery, it cannot develop maximally.

**4. Teaching Reading Using Power Point**

There are several principles in using Power Point in in the class. One of the tips is, as it is written by Ruffini (2009), is described as followings:

> However, PowerPoint is only a tool. Of itself, it will not improve learning or engage students in the learning process. It is up to the instructor to systematically design and present interactive presentations. The following design consideration guidelines address creating effective presentations:
> 1. Target audience: Define the audience. This enables the instructor to select appropriate vocabulary, graphics, and Internet links for the PowerPoint presentation.
> 2. Objectives: Write specific objectives for the PowerPoint presentation.
> 3. Key design steps:
> o Restrict the number of key topics (objectives) to no more than five per presentation.
> o Be consistent and minimalist with effects and transitions.
> o Do not use too many slides. An average of 12–20 per presentation is a good guideline.
> o Generally use no more than seven bullet lines on a slide, excluding a heading or use a short, three-sentence paragraph. Use key phrases and include only essential information.
> o For bullet points, use the $7 \times 7$ Rule: one main idea per line with no more than seven words per line and no more than seven lines per slide.
> o Use a font and a font size that are appropriate and clearly legible. Arial or Verdana is recommended for clarity, while a font such as Comic Sans can be used in less formal presentations. Do not use gimmicky fonts, and do not mix fonts.
> o Use no font smaller than 22 points.
> o Do not use capitals except for occasional emphasis — they are harder to read than lowercase letters.
> o Avoid italicized fonts — they are difficult to read quickly.
> o Check spelling and grammar.

o Use graphics where appropriate, but do not overuse them. No more than two graphics per slide is a good general rule.
o Limit the number of colors on a single slide, and keep colors consistent.
o Use sound and video from within PowerPoint very sparingly; sound rarely adds anything, and if not used tastefully, sound effects can become irritating.
o Use backgrounds that enable the audience to read the text with ease. Dark text on a light background is best. Patterned backgrounds can reduce readability of text.
o Use a slide menu and buttons to navigate your presentation.
o Do not read from your slides. The content of slides is for the audience.
o Do not speak to your slides. Many presenters face the direction of their presentation rather than their audience.

Based on the theory of teaching reading and also the principles and stages discussed before, the steps of teaching reading using Power Point in this research will be separated into opening, classroom extract, and closing.

a. Opening

1) Greeting

2) Checking the students' attendence or absence

3) Stating the objectives of the teaching learning

4) Discussing the benefit of the teaching learning

b. Classroom extract

1) Pre-Reading

a) Setting the Power Point up, then following the steps in the slides

b) Building interest: asking and answering questions related to the topic, digging up what the students know about the topic

2) Gist-Reading

a) Studying the texts in the module provided in Power Point; the genre, generic structure, language features and all about the texts

b) Studying the vocabulary used in the texts

c) Checking their reading comprehension skills through exercises for intensive reading

d) Discussing the answers

     e) Sharing the discussed topic with friends and the teacher via direct answer-question in the class

   3) Post-Reading

     a) Drawing conclusion

     b) Giving  assignment for extensive reading

c. Closing

   1) Giving summary

   2) Interactive session, the time for students to ask a question

   3) Reflecting the teaching learning

   4) Saying goodbye

## E. Intelligence

### 1. Intelligence and Intelligence Quotient

An intelligence, can be defined as the hereditary capability of someone to learn, understand, or apply something. Perkins (1995) defines intelligence as a combination of the ability to: (1) learn including all kinds of informal and formal learning by combinating the experience, education, and training; (2) pose problems including recognizing problem situations and transforming them into more clearly defined problems; and (3) solve problems including solving problems, acomplishing tasks, fashioning products, and doing complex projects.

Everybody has different level or kind of intelligence. Gardner in Armstrong (1994: 2-3) provides a means of mapping the broad range of abilities that humans possess by grouping their capabilities into seven comprehensive categories or intelligences:

1. Linguistic Intelligence, that is the capacity to use words effectively, whether orally (e.g., as a storyteller, orator, politician) or in writing (e.g., poet, playwright, editor, or journalist). This intelligence includes the ability to manipulate the syntax or structure of language, the phonology or sounds of language, the semantics or meanings of language, and the pragmatic dimentions or practical uses of language. Some of these uses include rhetoric (using language to convince others to take a spesific course of action),

mnemonics (using language to remember information), explanation (using language to inform), and metalanguage (using language to talk about itself).

2. Logical-mathematical Intelligence, that is the capacity to use numbers effectifely (e.g., as a mathematician, tax accountant, or statistician) and to reason (e.g., as a scientist, computer programmer, or logician).

3. Spatial Intelligence, that is the ability to perceive the visual-spatial world accurately (e.g., as a hunter, scout, or guide) and to perform transformations upon those perceptions (e.g., as an interior decorator, architect, artist, or inventor).

4. Bodily-kinesthetic Intelligence, that is expertise in using one's whole body to express ideas and feelings (e.g., as an actor, a mime, an athlete, or a dancer) and facility in using one's hands to produce or transform things (e.g., as a craftperson, sculptor, mechanic, or surgeon).

5. Musical Intelligence, that is the capacity to perceive (e.g., as a music aficionado), discriminate (e.g., as a music critic), transform (e.g., as a composer), ans express (e.g., as a performer) musical forms.

6. Interpersonal Intelligence, that is the ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people.

7. Intrapersonal Intelligence, that is self-knowledge and the ability to act adaptively on the basis of that knowledge.

Intelligence clearly has a powerful genetic component, but there are a number of environmental aids and hindrances; a stimulating environment, parental encouragement, good schooling, spesific reasoning skills, continued practice, and so on, certainly help a person become more intelligent. Someone's intelligence usually can be recognized by a score derived from one of several different standardized tests designed to assess intelligence.

The term "IQ," from the German, *Intelligenz-Quotient*, was devised by the German psychologist, William Stern in 1912 as a proposed method of scoring children's intelligence tests such as those developed by Alfred Binet and Théodore Simon in the early 20th Century. Lewis Terman accepted that form of scoring, expressing a score as a quotient of "mental age" and "chronological age," for his

revision of the Binet-Simon test, the first version of the Stanford-Binet Intelligence Scales.

Although the term "IQ" is still in common use, the scoring of modern IQ tests such as the Wechsler Adult Intelligence Scale is now based on standard scoring of the subject's rank order on the test item content with the median score set to 100, and a standard deviation of 15, although not all tests adhere to that assignment of 15 IQ points to each standard deviation.

IQ scores have been shown to be associated with such factors as morbidity and mortality, parental social status, and, to a substantial degree, parental IQ. While the heritability of IQ has been investigated for nearly a century, controversy remains regarding the significance of heritability estimates, and the mechanisms of inheritance are still a matter of some debate.

*Yayasan Cipta Daya Husada* (2011: 3) presents the result of an IQ test or IQ score in the standard score scale with the average (mean) : 100 and Deviation standard (DS) ; 10. there is also emotional quotient or personality and interest presented in definite value (nilai baku). Based on these two statistic score, it is derivated Intelligence score scale as the following:

| The Standard of General Intelligence Score | | |
|---|---|---|
| Intelligence | Grade | Potency |
| 131 + | A.  Extraordinary intelligence | 9 + |
| 120 – 130 | B.  Very intelligent | 8 – 9 |
| 110 – 119 | C.  Intelligent | 7 – 8 |
| 90 – 109 | D.  In average | 6 – 7 |
| 80 – 89 | E.  Rather low intelligent | 5 – 6 |
| 70 – 79 | F.  Low intelligent | 4 – 5 |
| – 69 | G.  Very low intelligent | – 4 |

IQ scores are used in many contexts: as predictors of educational achievement or special needs, by social scientists who study the distribution of IQ scores in populations and the relationships between IQ score and other variables, and as predictors of job performance and income.

As it is stated in first chapter that intelligence is open system and dynamic so that it can be modified in every age and ability level. It means that the students' capability can be increased even in any level intelligence of the students'. According to Armstrong (1994: 21),

> Most people can develop all their intelligences to a relatively competent level of mastery. Whether intelligences develop depends on three main factors; (1) biological endowment, including hereditary or genetic factors and insults or injuries to the brain before, during, and after birth, (2) personal life history, including experiences with parents, teachers, peers, friends, and others who either awaken intelligences or keep them from developing, and (3) cultural and historical background, including the time and place in which you were born and raised and the nature and state of cultural or historical developments in different domain.

The average IQ scores for many populations have been rising at an average rate of three points per decade since the early 20th century, a phenomenon called the Flynn effect. It is disputed whether these changes in scores reflect real changes in intellectual abilities, or merely methodological problems with past or present testing.

## 2. Aspects of Intelligence

In Krishna's article (2008), it is explained that there are some aspects of intelligence, they are

a. ability to grasp information from data. Two people may receive the same information, but one of them is able to comprehend it better and derive meaning from it. This is not necessarily a function of past knowledge, but an ability to recognize patterns in the data and derive conclutions. This kind of person is able to process huge amounts of information and make sense from them.

b. ability to remember information. Some people are able to cram more information than others. Some are able to remember relevant information from long ago. Memory is an essential part of the brain function. This kind of person is able to operate with large volumes of relevant information easily accessible while working can be highly efficient.

c.  ability to juggle multiple things. A good reader can predict the message of a text at glance. Many people break down when confronted with multiple things at the same time. The person with the ability to multi-task revels in such situation.

d.  ability to concentrate on one thing. In some cases, the ability to juggle also requires the ability to tune out certain thing

e.  ability to apply solutions on problems. Most people assosiate intelligence with problem-solving, it is not the solution that displays intelligence, but it is the process. Intelligence is the ability to match and apply strategies for problem solving. All strategies can be learned, but some people do better than others at understanding when using them.

f.  ability to devise new solutions. When facing with a unusual problem, a person with this ability can come up with new ways to solve it.

g.  ability to imagine. This goes beyond logical ability to devise solutions. People with this skill think unconventionally, don't only combine existing ideas or improve them.

Reffering to the elaboration above, it can be concluded that intelligence is a person's capability to (1) acquire knowledge (i.e. learn and understand); (2) apply knowledge (solve problems); and (3) engage in abstract reasoning. The aspects of intelligence are the abilities to grasp information, remember information, juggle multiple things, concentrate on one thing, apply solutions on problems, devise new solutions, and imagine something.

**F. Review of Related Studies**

There are some researchers giving information that gives strong reasons for the use of Moodle as medium in teaching reading comprehension.

In India, Courishi and his partners (2011) explored the implementation of effective e-learning through moodle and also presented how the various facilities of Moodle are used by tutors to provide interactive and stimulating learning experiences in providing higher education in various colleges of technology. In the paper, they concluded that by various supports offered by Moodle for E-learning, Moodle is a great tool for tutors because it is a platform to create and

save teaching material easily and a collaborative online platform for teachers and students to learn together. Besides creating courses, it is also very useful to join the online communities to keep yourself updated with the world and to know a circle of scholars that will truly encircle the globe. Through the internet connection, a lot of modules, which are very useful to extend the students knowledge, can be found easily. These tools help us to make teaching more effective. Thus the implementation of the information and communication technology in education with e-learning through moodle allows improving effectiveness of the education. E-learning allows better cooperation among the learners, the tutors and the students. The accessibility, usability and student collaborative learning  can be improved and higher motivation among the students and the teachers can be achieved with E-learning. Similarly, Nedeva (2005) also made a research in Trakia University, Bulgaria, to show E-learning process of education by Moodle software platform and their realisation in Technical College – Yambol. The implementation of the information and communication technology in education with e-learning management system allows improving effectiveness of the education. The Management System of Education allows better cooperation among the learners, the tutors and the students. The accessibility, usability and student collaborative learning are improved. Higher motivation among the students and the teachers is achieved.

Walker (2011: 1279) in his paper also finds that a successful implementation of an online learning environment at a system's compliance level, which was considered an outstanding achievement considering that implementation was above and beyond the existing pressure of teaching and research, and there was relatively short notice of the required innovation. Given this context, the majority of respondents acknowledged that their success could be largely attributed to some outstanding College-level support networks. With this support, respondents had been able to master some primary functions, such as uploading lecture notes / PowerPoint presentations. With these  advances, it was widely appreciated that Moodle had begun to offer students more flexibility over their learning. It is also suppoted by Yates (2011: 16-17) who says in his study

that the ELI's ongoing belief in the potential that Moodle has to positively enhance language learning has warranted a study being conducted on Moodle usage. Overall the survey was able to garner valuable information related to Moodle use, for instance the  statistic that more than 90% of survey respondents an average or above value on Moodle as a beneficial educational tool.

Nozawa (2011: 309) adds that there are many advantages to use Moodle as a common platform in a tertiary education setting, in particular in a multipoint e-learning environment. As Su (2006: p. 10) states, Moodle is a great tool for English teachers as a platform to save and archive teaching material easily as well as a collaborative platform for teachers and students to learn together. However, as Warschauer & Meskill (2000) claims that the key to successful use of technology in language teaching lies not in hardware or software but in humanware, Moodle itself does not promote learning or teaching on its own so that its effectiveness definitely lies in the way of teachers' active and interactive participation. The author will continue to teach both undergraduate EFL programs and content-based post-graduate programs to meet their needs or conduct collaborative research projects with an updated version of Moodle and employ it as an efficient, communicative way to interact with both teachers and students.

Then, Al-Ajlan (2008: 63) states in his paper that Moodle is a kind of VLE and it is now widely used all over the world by schools, institutes, universities, companies, independent educators, and home schooling parents.  It has great potential for creating a successful e-learning experience by providing an abundance of excellent tools that can be used to enhance conventional classroom instruction in any VLE system. Moodle can scale from a single-teacher site to a more than 50-thousand-student university.

By considering the concept of the nature of reading, Moodle, and review of related research conducted the use of Moodle as teaching learning medium, it can be assumed that the use of Moodle is the effective media to teach English language, especially on reading comprehension skill.

**G. Rationale**

1. The difference of using Moodle and Power Point to teach reading

Moodle is one the computer's software package that is being developed to be used as one of media in teaching learning process. For a couple of reasons Moodle is more challenging and interesting than Power Point. Moodle provides various features that are suitable to teach reading comprehension skills. Then, there is pleasure sense in this media because the materials can be presented in games in its activity, various exercises through its quiz, and various types of questions like multiple choice, completion, gap-fill exercise, jumbled word or sentence, matching, and even essay, through the computer. Students can be more active because they involve directly in operating their computer to do the exercises. If they have problems, they can discuss it directly with the teacher or their friends through the forums provided or take a look to the materials or theory in the modules inside the course feature. It will raise their self confidence and motivation in practice reading comprehension repeatedly. The process of the scoring is faster and only takes a few minutes so that they can check the mistakes soon. The exercises can be done on line, so the students can also practice it anywhere they like or they have a chance. It makes the students feel untied and relax when they learn the materials.  The students may learn the materials individually or by discussing with their friends too.

Power Point is also one the computer's software package that can be used as one of media in teaching learning process, even it is the commonest aid used by teachers right now. It is actually good media to teach with its materials projected on the slides in front of the class and hyperlink connecting it to other files like video, pictures, or others related materials, but the class is still one directed. Even though it depends on the class activity, it is still teacher-centered. The projector limits the visible size and the number of the contents, so extensive reading with longer texts cannot be presented through the slides because the screen won't be enough or readable.

Above all, based on those all reasons, it can be assumed that Moodle is more effective than using Power Point to teach reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

2. The difference between students who have high intelligence quotient and those who have low intelligence quotient in reading

As it has been discussed before that the students' achievement is also influenced by the students' intelligence. Students having high intelligence will comprehend the materials, for example English texts with their reading comprehension questions, more easily and faster than those having low intelligence. It is related to the characteristics of high intelligent students who are usually able to grasp information, remember information, juggle multiple things, concentrate on one thing, apply solutions on problems, devise new solutions, and imagine something better than students with low intelligence.

Whereas the students having low itelligence will need longer time and more intensive guidance in understanding and mastering the materials, including reading skills. If the teacher lets them study independently in most of the time, they will have more problems than students with high intelligence, and their achievement will not be optimal. Teacher's hands are more needed for them.

Therefore, there is a possibility that the students having high intelligence quotient have better reading skills than those having low intelligence quotient.

3. The interaction between media and students' intelligence in teaching reading

It cannot be denied that the use of media have a great influence for the success of teaching learning proccess. The use of media can help the students in learning something. They can get better achievement by using the suitable one. The teacher should be able to find appropriate media that can motivate students to attend the reading class. This will result in better achievement in reading skill too.

Based on the characteristics, the students having low intelligence quotient need more explanation from the teacher so that one direction teaching-learning, as it uses Power Point, will be suitable for them. They need more guidance than the students having high intelligence quotient who tend to be more independent. Learning using Moodle needs more concentration, fast

understanding and creativity owned by students having high intelligence quotient. Therefore it can be stated that Moodle is more suitable for the students having high intelligence quotient and Power Point is more suitable for the students having low intelligence quotient.

Then, it can be assumed that there is an interaction between media and students' intelligence in teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

## G. Hypothesis

Based on review of related literature and rationale, the hypothesis can be formulated as follows:

1. Using Moodle is more effective than using Power Point to teach reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012

2. The students who have high intelligence quotient have better reading skill than those who have low intelligence quotient of the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012

3. There is an interaction between media and students' intelligence in teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

## CHAPTER III
## RESEARCH METHODOLOGY

### A. The Place and Time of the Research

The research was held at SMA Negeri 2 Purwokerto. This high school has a good strong building with a wide yard around. Even though it is located in the center of the town, on Jalan Jenderal Gatot Soebroto No. 69 Purwokerto, but it has fresh air and nice situation to study because of its trees and plants surround. It has also good facilities supporting the teaching learning process, like big complete classrooms with a computer set, LCD, and television in every class. There are a language laboratory, two good computer laboratories, three laboratories for physics, chemistry, and biology there. For religious activities, there is also a mosque inside the school area.

SMA Negeri 2 Purwokerto has 29 classes containing of three grades. In the first grade, called Class X, there are 9 regular classes, X.1 to X.9. The second grade, Class XI, is separated into 7 Science Program classes and 2 Social Program ones. The last, the third grade or Class XII also contains of 7 Science Program classes and 2 Social Program ones. Besides, in this high school there are also two acceleration classes. Each class has 32 students for regular classes and 24 for acceleration classes, so the number of students at the school is 912 students.

This research was held from January 2012 to October 2012. The following was the time schedule.

| Activity | Jan 12 | Feb 12 | Mrch 12 | Aprl 12 | May 12 | Jun 12 | Jul 12 | Ags 12 | Sept 12 | Oct 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| Proposal | X | X | | | | | | | | |
| Reviewing Literature | X | X | | | | | | | | |
| Developing Instrument | | X | X | X | | | | | | |
| Doing the Treatment | | | | X | X | X | | | | |
| Collecting and Analyzing the Data | | | | | X | X | X | | | |
| Writing the Report | | | | | | X | X | X | X | |
| Submitting the Document | | | | | | | | | X | X |

**B. The Method of Research**

To achieve the objectives of the study, an experimental research was applied. The experimental research is defined as the technique, which attempts to ferret out cause and effect the relationship. Through experimentation, cause and effect relationship can be isolated. Because of its ability to identify causation, the experimental approach has come to represent the prototype of the scientific method for solving problem (Cristentsen, 1977: 35). Fraenkel and Wallen (1993: 240) state that the experimental research is one of the most powerful research methodologies because it is the best way to establish cause and effect relationship between variables. Besides, it is the only type of research that directly attemps to influence a particular variable.

The essensial feature of experimental study is that investigators deliberately control and manipulate the conditions which determine the events in which they are interested at its simplest, an experiment involves making a change independent variable- and observing the effect of that change on another variable – called dependent variable (Cohen, Manion, & Marrison, 2005: 228).

There are two kinds of experimental research, they are true experimental research, a condition when the researcher can manipulate and control all dependent and independent variables, and quasi experimental research, where the researcher can't control and manipulate those variables (Budiono, 2003: 79). Here the kind of the experimental research used was quasi one.

Then, Budiono (2003: 89) adds eight experimental designs as a sense of the result of the study and enhance the control, they are The One Shot Case Study, One Group Pre-Test Post-Test Design, Static Group Comparison, The Randomized Static Group Comparison Design, The Matching Group Comparison Design, The Randomized Control Group Pre-Test Post-Test Design,  The Randomized Solomon Four Group Design, and Factorial Design. This research uses the Factorial Design. The advantage of factorial design is that it allows a researcher to study the interaction of independent variable with one or more other variables, sometimes called moderator variables. Factorial Design makes the writer can see how one of the variables might moderate each other. Within this

design, it is possible to assess the effect of each independent variable separately as well as theis conjoint or simultaneous effect or interaction (Tuckman, 1978: 138)

The factorial design was applied here studying two variables, they were Moodle and Powerpoint as independent variables, reading skill as dependent variable and student's intelligence quotient as the moderator variable.

## C. Population, Sample, and Sampling

a.  Population

Population of the research is all the members of a group or certain area where a research is held. According to Singh (2006: 82), population or universe means the entire mass of observations, which the parent group is from which a sample is to be formed. The sample observations provide only an estimate of the population characteristics.

The population of the research was the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012. There were exactly 312 students or population of X grade in SMA Negeri 2 Purwokerto. They were separated into 9 regular classes consisting of 32 students and one acceleration class with its 24 students.

b.  Sample

Sample is a certain number of population taken for a research. The samples in this research were two classes of X grade at SMA Negeri 2 Purwokerto chosen randomly. These two classes consisting 32 students for each were taken, one was to be experimental group and another was control group. One was taught with Moodle as experimental class, and another was taught with Power Point as the control class.

c.  Sampling

The research design is based on the sampling of the study. A good research design provides information concerning with the selection of the sample population treatments and controls to be imposed. Sampling is the technique in selecting the sample from their population. 'Sampling design' in fact means the joint procedure of selection and estimation. Sampling should be such that error of estimation is minimum. Fox in Singh (2006: 82) says "In the social sciences, it is

not possible to collect data from every respondent relevant to our study but only from some fractional part of the respondents. The process of selecting the fractional part is called sampling."

The sampling used in this research was cluster random sampling. Banister (2011: 12) in his *Research in Education, a Course Packet* states that cluster random sampling is a method in sampling where population is divided into clusters; then clusters are randomly chosen.

In this research, the population was the students of X grade at SMA Negeri 2 Purwokerto year 2011/2012. Randomly, two classes were chosen from X.1 to X.9 to be observed by using cluster random sampling; then those two classes were randomly chosen as an experimental class and a control class.

## D. The Technique of Collecting Data

Data collecting is a process of obtaining the primary data in the research to be analyzed in order to find the result. This research used IQ test document and the reading tests.

1. IQ Test Document

As it has been discussed before that IQ test is a test used to measure the level of someone's IQ. In this research, IQ test held by SMA Negeri 2 Purwokerto anually to the first grader was used to be the basic information. From the result, two classes were taken to be the subject of the research. For experimental group, a X grade class consisting of 32 students was taken; the students were then classified into students having high Intelligence Quotient and students having low Intelligence Quotient. For control class, another X grade class consisting of 32 students was also taken; then the students were also classified into those having high Intelligence Quotient and having low Intelligence Quotient.

2. Reading test

The reading test is held to find the students' reading skill. Content validity is used and it is viewed from the appropriateness of the content of the test to the curriculum that will be measured. The procedure in formulating the test are: (a) determining the indicators of reading skill that would be measured based on the material and the objective of the curriculum in the population, (b) formulating

the blueprint of the test based on the indicators chosen, (c) formulating the items of the questions of the test which were based on the indicators of reading skill.

The reading test items have to be valid and reliable. The reading test is tried out to know the validity and the reliability. The validity of the test is analyzed by the following formula (Biserial Point Corelation)

$$s_t = \sqrt{\frac{\sum x_t^2}{n}}$$

$$\overline{X_t} = \frac{\sum X_t}{n}$$

$$r = \frac{\overline{X_i} - \overline{X_t}}{s_t} \sqrt{\frac{p_i}{q_i}}$$

Where :
r               : Biserial point correlation validity
$S_t$           : Standard of deviation
$p$             : the testy proportion that can answer the correct answer of items
$q$             : 1 – p
$\overline{X_t}$ : the average of total score for all testy
$\overline{X_i}$ : the average of score testy for the correct answer

The test items are valid if *r obtained* is higher than *r table* or $r_o > r_t$ and invalid if *r obtained* is lower than *r table* or $r_o < r_t$

Then, to know the reliability, the following Kuder and Richardson Formula (KR$_{21}$) was used.

$$r_{kk} = \frac{k}{k-1}\left(1 - \frac{\sum pq}{s_t^2}\right)$$

Where   $r_{kk}$           : Kuder –Richardson formula 20 reliability coefficient

$k$            : the number of test items

p            : the proportion of test takers who pass the items

q            : the proportion of test takers who fail the items

$St^2$         : the variance of the total test scores

The instrument is reliable if r obtained or $r_{kk}$ is higher than r table or $r_o > r_t$

The reading test used a the surce of this research data was also analysed as the explanation above to know whether it was valid and reliable.

**E. The Technique of Analyzing the Data**

The techniques used in analyzing the data in this research were descriptive analysis and inferential analysis.

**1. The Descriptive Analysis**

The descriptive analysis is used to look for the mean, mode, median, and the standard deviation of the reading test scores. The formulas are:

$$\text{Mean } (\overline{X}) = \text{Xo} + i \left( \frac{\sum f_i c_i}{\sum f_i} \right)$$

$$\text{Mode (Mo)} = L + i \left( \frac{f_i}{f_1 + f_2} \right)$$

$$\text{Median (Me)} = L + i \left( \frac{\frac{n}{2} - cfb}{fw} \right)$$

$$\text{Data in frequency distribution } \overline{X} = \frac{\sum f_i X_i}{n}$$

The normality and the homogeneity tests are done before testing the hypothesis. The formulas are:

The normality

$$s_i^2 = \frac{\sum X_i^2 - \frac{\left(\sum X_i\right)^2}{n}}{n-1}$$

The sample is in normal distribution if Lo < Lt.

The homogeneity

$$s^2 = \left\{ \sum (n_1 - 1)s_1^2 / \sum (n_1 - 1) \right\}$$

$$B = (\log s2) \sum (n_1 - 1)$$

$$\chi^2 = (\ln 10)\{ B - (df)\log s_i^2 \}$$

The data are homogeneous if $\chi_o^2$ is lower than $\chi_t^2$.

## 2. Inferential Analysis

To analyse the data in the research, inferential analysis used here was analysis of variance or ANOVA test to find out the significant difference between two groups of means.

The design of ANOVA can be seen in the following table

| IQ | Using Moodle Media ($A_1$) | Using Power Point ($A_2$) | Total |
|---|---|---|---|
| High($B_1$) | $A_1B_1$ | $A_2B_1$ | $B_1$ |
| Low($B_2$) | $A_1B_2$ | $A_2B_2$ | $B_2$ |
| Total | $A_1$ | $A_2$ | |

Note: $A_1$ : the mean score of reading test of students taught using Moodle

$A_2$ : the mean score of reading test of students taught using Power Point

$B_1$ : the mean score of reading test of students having high intelligence

$B_2$ : the mean score of reading test of students having low intelligence

$A_1B_1$ : the mean score of reading test of students having high intelligence quotient who are taught using Moodle medium

$A_2B_1$ : the mean score of reading test of students having high intelligence quotient who are taught using Power Point medium

$A_1B_2$ : the mean score of reading test of students having low intelligence quotient who are taught using Moodle medium

$A_2B_2$ : the mean score of reading test of students having low intelligence quotient who are taught using Power Point medium

The data are analyzed using the following ways:

a. The total sum of squares

$$\sum x_t{}^2 = \sum X^2 - \frac{\left(\sum X\right)^2}{N}$$

b. The sum of squares between groups

$$\sum x_b{}^2 = \frac{\left(\sum X_1\right)^2}{n_1} + \frac{\left(\sum X_2\right)^2}{n_2} + \frac{\left(\sum X_3\right)^2}{n_3} + \frac{\left(\sum X_t\right)^2}{N}$$

c. The sum of squares within groups

$$\sum x_w{}^2 = \sum x_l{}^2 - \sum x_b{}^2$$

d. The between-column sum of squares

$$\sum x_{bc}{}^2 = \frac{\left(\sum X_{c1}\right)^2}{n_{c1}} + \frac{\left(\sum X_{c2}\right)^2}{n_{c2}} - \frac{\left(\sum X_1\right)^2}{N}$$

e. The between-raw sum of squares

$$\sum x_{br}{}^2 = \frac{\left(\sum X_{r1}\right)^2}{n_{r1}} + \frac{\left(\sum X_{r2}\right)^2}{n_{r2}} - \frac{\left(\sum X_1\right)^2}{N}$$

f. The sum of squares iteraction

$$\sum x_{un}{}^2 = \sum x_b{}^2 - \left(\sum x_{bc}{}^2 + \sum x_{br}{}^2\right)$$

g. df for between-columns sum of squares = C-1

df for between-rows sum of squares = R-1

df for interaction (C-1)(R-1)

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

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

df for total sum of squares = N-1

C = the number of column

R = the number of rows

G = the number of groups

n = the number of subjects in one group

N = the number of subjects in all groups

Here is the table describing the result of ANOVA in brief.

| Source of Variance | SS | Df | MS | $F_o$ | $F_{t(.05)}$ | $T_{t(.01)}$ |
|---|---|---|---|---|---|---|
| Between columns (Teaching media) | | | | | | |
| Between rows (Intelligence) | | | | | | |
| Columns by rows (Interaction) | | | | | | |
| Between groups | | | | | | |
| Within groups | | | | | | |
| Total | | | | | | |

However, the ANOVA analysis simply indicates there is difference between two or more group means, but it does not tell what means there is a significant difference between. Then, a post hoc test needs to be done. The Tuckey Test is a post hoc test designed to perform a pairwise comparison of the means to see where the significant difference is. This test is done after the effect is found (null rejected) in the ANOVA Problem. Tuckey test is then applied to find out the difference between the two teaching media and the mean score to know which is more effective, Moodle or Power Point, in teaching reading.

h.  Tukey Test

a)  Between columns q $= \dfrac{\overline{X}c_1 - \overline{X}c_2}{\sqrt{error\ var iance\,/\,n}}$

b)  Between rows q $= \dfrac{\overline{X}r_1 - \overline{X}r_2}{\sqrt{error\ var iance\,/\,n}}$

c)  Between columns $_{(HI)}$ q $= \dfrac{\overline{X}c_1r_1 - \overline{X}c_2r_1}{\sqrt{error\ var iance\,/\,n}}$

d)  Between columns $_{(LI)}$ q $= \dfrac{\overline{X}c_1r_2 - \overline{X}c_2r_2}{\sqrt{error\ var iance\,/\,n}}$

or  q $= \dfrac{\overline{X}c_2r_2 - \overline{X}c_1r_2}{\sqrt{error\ var iance\,/\,n}}$

The statistic test is gained by dividing the difference between the means by the square root of the ratio of the within group variation and the sample size.

TS : q $= \dfrac{\overline{X_i} - \overline{X_j}}{\sqrt{S_w^2\,/\,n}}$

3. **Statistical Hypothesis**

The researcher formulated the statistical hypothesis that consists of null hypothesis ($H_0$) and alternative hypothesis ($H_a$) which is presented as:

1)  The difference in reading comprehension between students who are taught by using Moodle and students who are taught by using Power Point.

H$_{01}$      :   $\mu_{A1} = \mu_{A2}$

H$_{a1}$      :   $\mu_{A1} > \mu_{A2}$

$H_{01}$     :    There is no significant difference in reading comprehension between the students who are taught by using Moodle and students who are taught by using Power Point.

$H_{a1}$     :    The students who are taught by using Moodle have better reading skill than students who are taught by using Power Point.

2) The difference in reading comprehension between students who have low level of intelligence with the students with high level of intelligence in reading.

$H_{02}$     :    $\mu_{B1} = \mu_{B2}$

$H_{a2}$     :    $\mu_{B1} > \mu_{B2}$

$H_{02}$     :    There is no significant difference in reading comprehension between the students who have low level of intelligence and students who have high level of intelligence.

$H_{a2}$     :    The students who have high level of intelligence have better reading skill than the students who have low level of intelligence.

3) The interaction between teaching strategies and students' intelligence in teaching reading.

$H_{03}$     :    $\mu_A \times \mu_B = 0$

$H_{a3}$     :    $\mu_A \times \mu_B \neq 0$

$H_{03}$     :    There is no interaction between teaching media and students' intelligence in reading. It means that the effect of the media on reading skill does not depend on intelligence level in teaching learning.

$H_{a3}$     :    There is an interaction effect between teaching media and students' intelligence in teaching reading. It means that the effect of the media on reading skill depends on intelligence level in teaching learning.

CHAPTER IV

THE RESULT OF THE STUDY

This chapter presents the result of the research. It is divided into four parts, they are the description of the data, normality and homogeneity test, hypothesis test, and the discussion of the result of the study.

A. The Description of the Data

The data presented in this research are the result of the reading test. It includes the mean, mode, median, deviation standard, and frequency distribution, then followed by histogram and polygon. The description of data are based on the analyzed groups which are divided into eight groups. The data of each group are described as follows:

1.   The data of reading test of the students taught using Moodle ($A_1$)

Descriptive analysis of $A_1$ data shows that the reading scores of students taught using Moodle are 58 up to 96. The mean score is 77.844, the mode is 80.833, the median is 84.625, and the standard deviation is 22.967. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.1. Frequency Distribution of $A_1$*

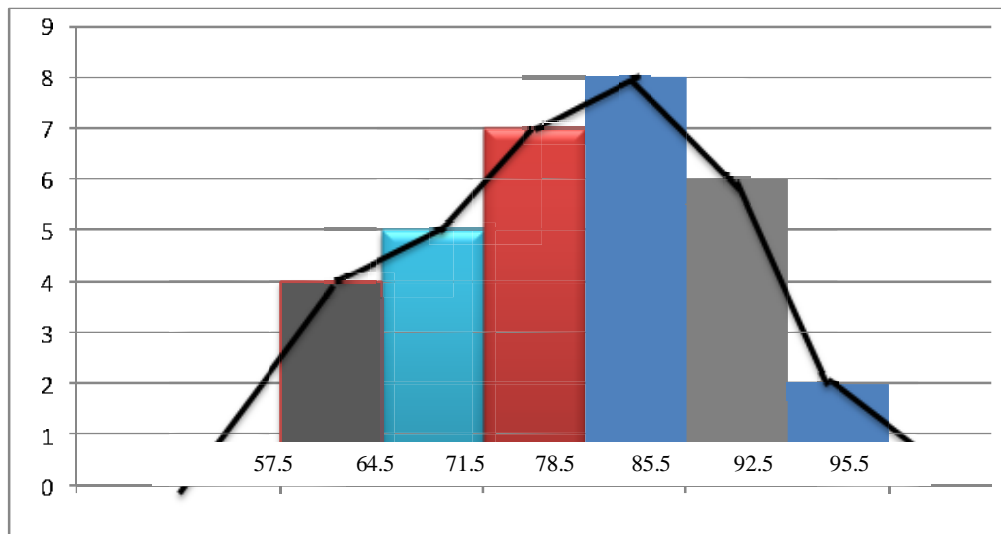| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 58 - 64 | 57.5 – 64.5 | 61 | IIII | 4 | 12.50 |
| 65 - 71 | 64.5 – 71.5 | 68 | IIII | 5 | 15.63 |
| 72- 78 | 71.5 – 78.5 | 75 | IIII II | 7 | 21.88 |
| 79 - 85 | 78.5 – 85.5 | 82 | IIII III | 8 | 25.00 |
| 86 - 92 | 85.5 -92.5 | 89 | IIII I | 6 | 18.75 |
| 93 -99 | 92.5 -99.5 | 96 | II | 2 | 6.25 |
| | | | | 32 | 100 |

*Figure 4.1. Histogram and Polygon of Data A₁*

2.  The data of reading test of students taught using Power Point (A₂)

Descriptive analysis of A₂ data shows that the reading scores of students taught using Power Point are 54 up to 92. The mean score is 72.188, the mode is 81.308, the median is 78.063, and the standard deviation is 27.095. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.2. Frequency Distribution of A₂*

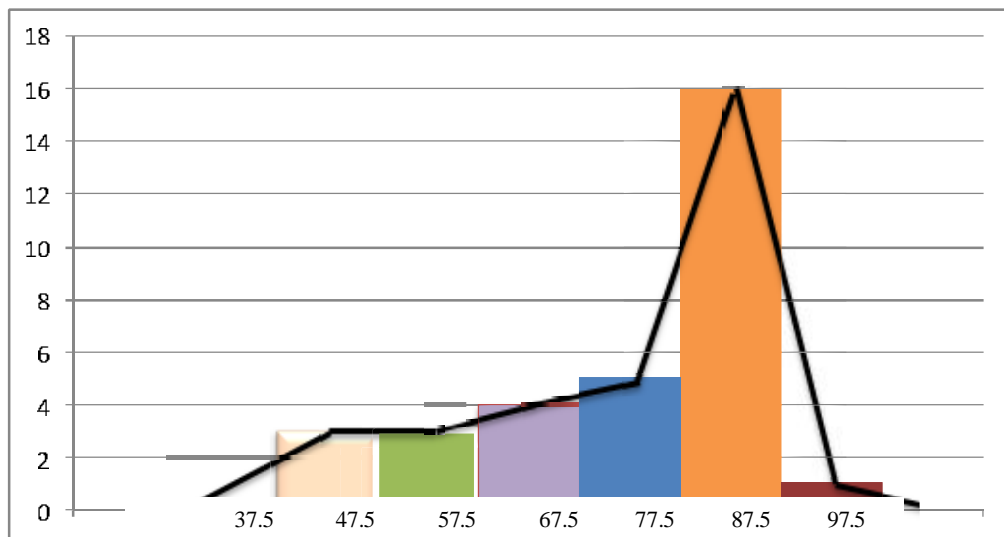| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 38 - 47 | 37.5 - 47.5 | 42.5 | III | 3 | 9.38 |
| 48 - 57 | 47.5 – 57.5 | 52.5 | III | 3 | 9.38 |
| 58 - 67 | 57.5 – 67.5 | 62.5 | IIII | 4 | 12.50 |
| 68 - 77 | 67.5 – 77.5 | 72.5 | IIII | 5 | 15.63 |
| 78 - 87 | 77.5 – 87.5 | 82.5 | IIII IIII IIII I | 16 | 50.00 |
| 88 -97 | 87.5 - 97.5 | 92.5 | I | 1 | 3.13 |
|  |  |  |  | 32 | 100 |

*Figure 4.2. Histogram and Polygon of Data A₂*

3.   The data of reading test of students having high intelligence (B₁)

Descriptive analysis of B₁ data shows that the reading scores of students having high intelligence are 56 up to 92. The mean score is 76.125, the mode is 80.100, the median is 81.167, and the standard deviation is 20.602. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.3. Frequency Distribution of B₁*

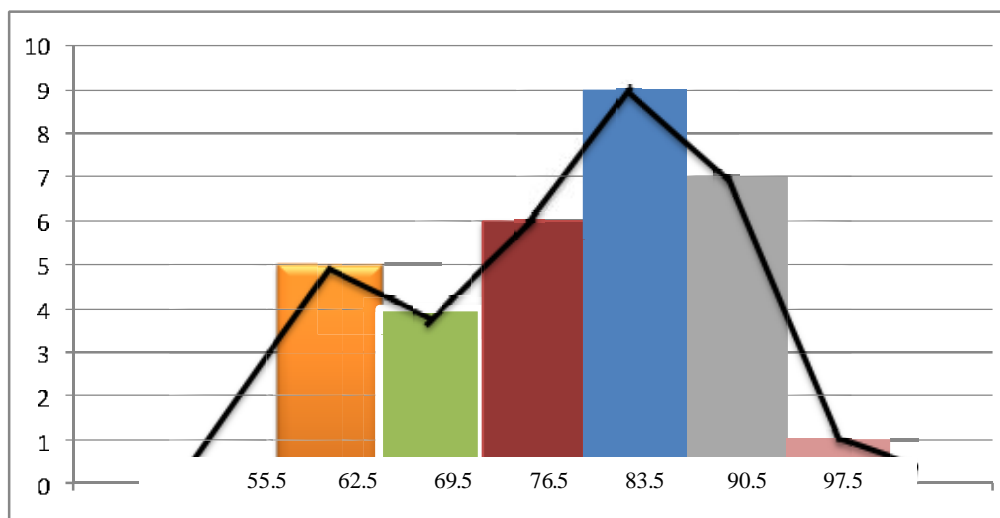| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 56 - 62 | 55.5 - 62.5 | 59.5 | IIII | 5 | 15.63 |
| 63 - 69 | 62.5 - 69.5 | 66.5 | IIII | 4 | 12.50 |
| 70- 76 | 69.5 - 76.5 | 73.5 | IIII I | 6 | 18.75 |
| 77 - 83 | 76.5 - 83.5 | 80.5 | IIII IIII | 9 | 28.13 |
| 84 - 90 | 83.5 - 90.5 | 87.5 | IIII II | 7 | 21.88 |
| 91 -97 | 90.5 - 97.5 | 94.5 | I | 1 | 3.13 |
|  |  |  |  | 32 | 100 |

*Figure 4.3. Histogram and Polygon of Data B₁*

4.  The data of reading test of students having low intelligence ($B_2$)

Descriptive analysis of $B_2$ data shows that the reading scores of students having low intelligence are 38 up to 96. The mean score is 74.063, the mode is 80.357, the median is 87.500, and the standard deviation is 28.749. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.4. Frequency Distribution of $B_2$*

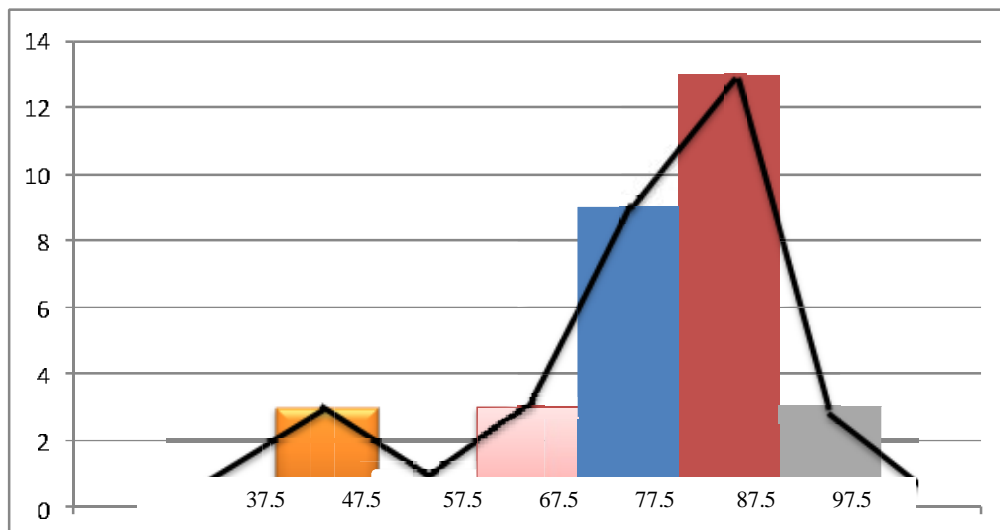| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 38 - 47 | 37.5 - 47.5 | 42.5 | III | 3 | 9.38 |
| 48 - 57 | 47.5 - 57.5 | 52.5 | I | 1 | 3.13 |
| 58- 67 | 57.5 - 67.5 | 62.5 | III | 3 | 9.38 |
| 68 - 77 | 67.5 - 77.5 | 72.5 | IIII IIII | 9 | 28.13 |
| 78 - 87 | 77.5 - 87.5 | 82.5 | IIII IIII III | 13 | 40.63 |
| 88 -97 | 87.5 - 97.5 | 92.5 | III | 3 | 9.38 |
| | | | | 32 | 100 |

*Figure 4.4. Histogram and Polygon of Data B$_2$*

5. The data of reading test of students having high intelligence quotient who are taught using Moodle medium (A$_1$B$_1$)

Descriptive analysis of A$_1$B$_1$ data shows that the reading scores of students having high intelligence taught using Moodle are 58 up to 90. The mean score is 74.625, the mode is 63.500, the median is 63.500, and the standard deviation is 22.650. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.5. Frequency Distribution of A$_1$B$_1$*

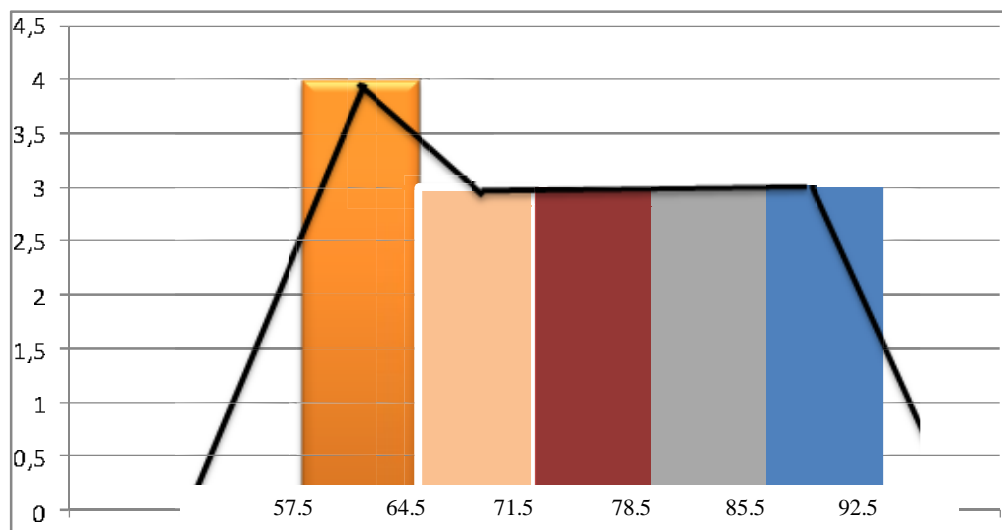| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 58 - 64 | 57.5 - 64.5 | 61.5 | IIII | 4 | 25.00 |
| 65 - 71 | 64.5 - 71.5 | 68.5 | III | 3 | 18.75 |
| 72 - 78 | 71.5 - 78.5 | 75.5 | III | 3 | 18.75 |
| 79 - 85 | 78.5 - 85.5 | 82.5 | III | 3 | 18.75 |
| 86 - 92 | 85.5 - 92.5 | 89.5 | III | 3 | 18.75 |
| | | | | 16 | 100 |

*Figure 4.5. Histogram and Polygon of Data $A_1B_1$*

6.  The data of reading test of students having low intelligence quotient who are taught using Moodle medium ($A_1B_2$)

Descriptive analysis of $A_1B_2$ data shows that the reading scores of students having low intelligence taught using Moodle are 68 up to 96. The mean score is 81.581, the mode is 82.500, the median is 81.900, and the standard deviation is 9.008. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.6. Frequency Distribution of $A_1B_2$*

| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 68 - 73 | 67.5 - 73.5 | 70.5 | III | 3 | 18.75 |
| 74 - 79 | 73.5 - 79.5 | 76.6 | III | 3 | 18.75 |
| 80- 85 | 79.5 - 85.5 | 82.5 | IIII | 5 | 31.25 |
| 86 - 91 | 85.5 - 91.5 | 87.5 | III | 3 | 18.75 |
| 92 - 97 | 91.5 - 97.5 | 94.5 | II | 2 | 12.50 |
|  |  |  |  | 32 | 100 |

*Figure 4.6. Histogram and Polygon of Data $A_1B_2$*

7.  The data of reading test of students having high intelligence quotient who are taught using Power Point medium ($A_2B_1$)

    Descriptive analysis of $A_2B_1$ data shows that the reading scores of students having high intelligence taught using Power Point are 56 up to 92. The mean score is 76.775, the mode is 83.192, the median is 80.500, and the standard deviation is 16.836. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.7. Frequency Distribution of $A_2B_1$*

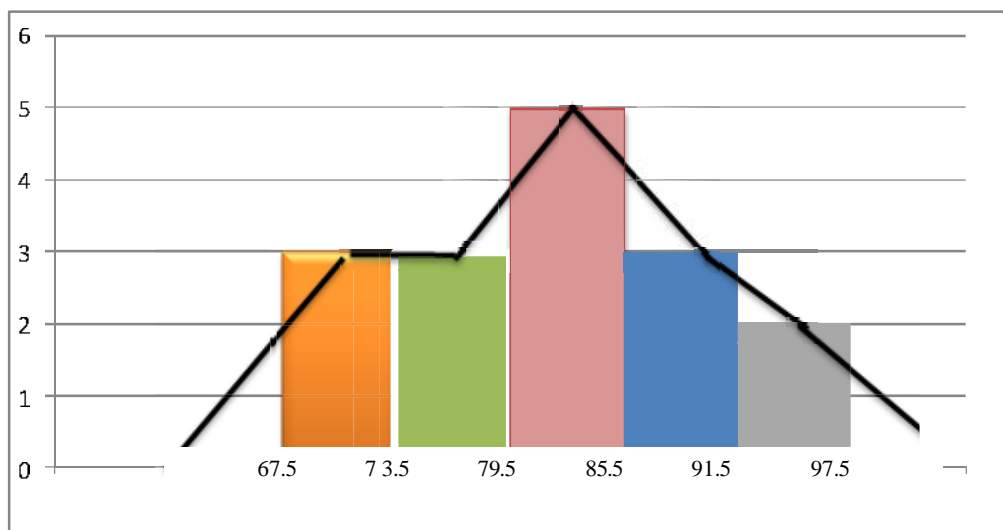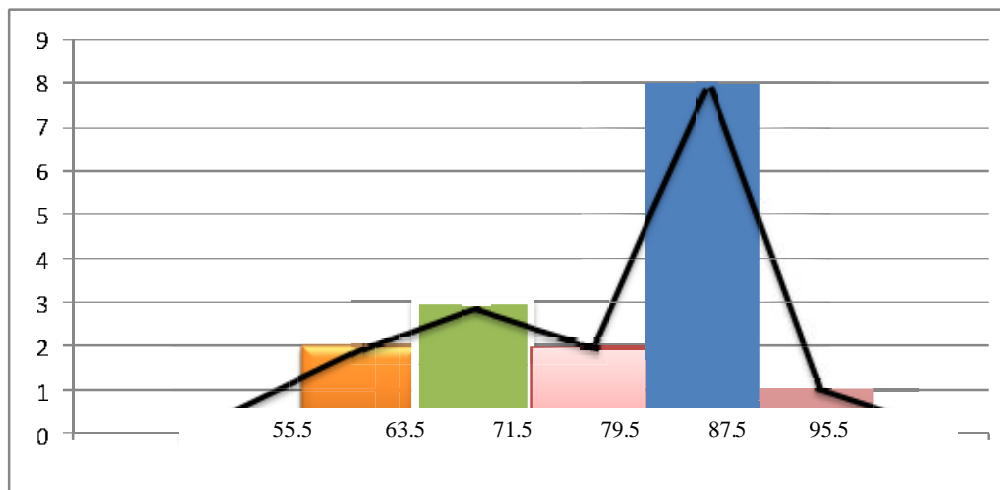| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 56 - 63 | 55.5 - 63.5 | 59.5 | II | 2 | 12.50 |
| 64 - 71 | 63.5 - 71.5 | 67.5 | III | 3 | 18.75 |
| 72- 79 | 71.5 - 79.5 | 75.5 | II | 2 | 12.50 |
| 80 - 87 | 79.5 - 87.5 | 83.3 | IIII III | 8 | 50.00 |
| 88 - 95 | 85.5 - 95.5 | 89.5 | I | 1 | 6.25 |
|  |  |  |  | 16 | 100 |

*Figure 4.7. Histogram and Polygon of Data $A_2B_1$*

8.   The data of reading test of students having low intelligence quotient who are taught using Power Point medium ($A_2B_2$)

Descriptive analysis of $A_1$ data shows that the reading scores of students having low intelligence quotient taught using Power Point are 38 up to 84. The mean score is 67.500, the mode is 80.833, the median is 90.833, and the standard deviation is 32.863. The frequency distribution is presented in the table below followed by the histogram and polygon.

*Table 4.8. Frequency Distribution of $A_2B_2$*

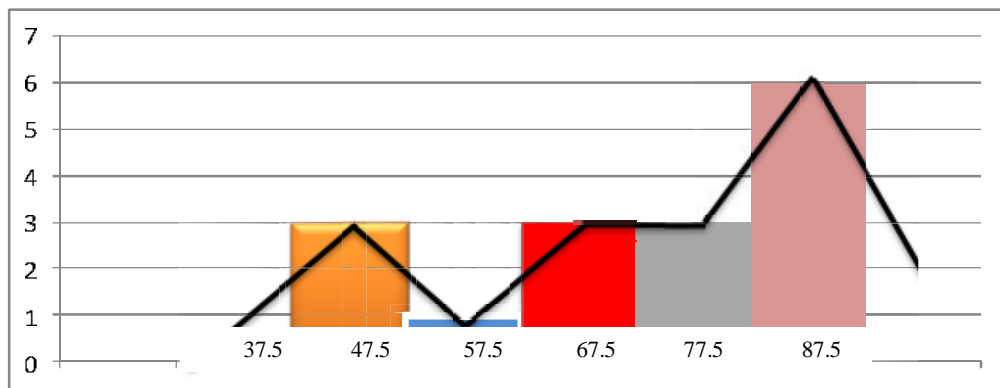| Class Limits | Class Boundaries | Mid point | Tally | Frequency | Percentage |
|---|---|---|---|---|---|
| 38 - 47 | 37.5 - 47.5 | 42.5 | III | 3 | 18.75 |
| 48 - 57 | 47.5 - 57.5 | 52.5 | I | 1 | 6.25 |
| 58- 67 | 57.5 - 67.5 | 62.5 | III | 3 | 18.75 |
| 68 - 77 | 67.5 - 77.5 | 72.5 | III | 3 | 18.75 |
| 78 -87 | 77.5 - 87.5 | 82.5 | IIII I | 6 | 37.50 |
| | | | | 16 | 100 |

*Figure 4.8. Histogram and Polygon of Data $A_2B_2$*

B. Normality and Homogeneity Test

Before analyzing the data using inferential analysis, normality and homogeneity test have to be done. The normality test is done to find out whether the sample is in normal distribution. Whileas the homogeneity test is to know whether the data are homogeneous. Each test will be presented in the following section:

1. Normality test

The sample is in normal distribution if $L_o$ (L obtained) is lower than $L_t$ (L table) at the level of significance $\alpha = 0.05$.

*Table 4.9. The Summary of Normality Test Result*

| NO | DATA | Number of Sample | $L_o$ | $L_t$ | Distribution of Population |
|----|------|------------------|-------|-------|----------------------------|
| 1 | $A_1$ | 32 | 0.0753 | 0.1566 | normal |
| 2 | $A_2$ | 32 | 0.1299 | 0.1566 | normal |
| 3 | $B_1$ | 32 | 0.1035 | 0.1566 | normal |
| 4 | $B_2$ | 32 | 0.1040 | 0.1566 | normal |
| 5 | $A_1B_1$ | 16 | 0.118 | 0.2215 | normal |
| 6 | $A_1B_2$ | 16 | 0.130 | 0.2215 | normal |
| 7 | $A_2B_1$ | 16 | 0.132 | 0.2215 | normal |
| 8 | $A_2B_2$ | 16 | 0.136 | 0.2215 | normal |

2. Homogeneity test

Homogeneity is done to find out wether the data are homogeneous. If $\chi_o^2$ is lower than $\chi_t^2$ (0.05), it can be said that the data are homogeneous.

*Table 4.10. The Homogeneity Test*

| Sample | df | 1/(df) | $(S_i)^2$ | $Log(S_i)^2$ | $(df)Log(S_i)^2$ |
|:---:|:---:|:---:|:---:|:---:|:---:|
| 1 | 15 | 0.06667 | 96.467 | 1.98438 | 29.7657 |
| 2 | 15 | 0.06667 | 225.717 | 2.35356 | 35.3035 |
| 3 | 15 | 0.06667 | 65.583 | 1.81679 | 27.2519 |
| 4 | 15 | 0.06667 | 114.650 | 2.05937 | 30.8906 |
| $\Sigma$ | 60 | 0.26667 | | | 123.212 |
| $(X_o)^2$ | 6.282 | | | $(X_t)^2$ | 7.815 |

$$\chi^2 = (\ln 10)\{B-(df)\log s_i^2\}$$

$$= (2.3026)(125{,}94-(3x2.099))$$

$$= (2.3026)(125.94-123.212)$$

$$= \mathbf{6.282}$$

From the result of the calculation above, it can be seen that $\chi_o^2 = 6.282$ is lower than $\chi_t^2$ at the level of significance $\alpha = 5\%$, that is 7.815. Therefore, the data are homogeneous.

C. Hypothesis Test

The process of testing hypothesis can be held after the results of normality and homogeneity test are fulfilled. The data analysis is done by using multifactor analysis of variance 2 x 2 ANOVA. This ANOVA test is to find out whether there is a significant difference and an interaction. Then, the analysis is continued using Tuckey test to compare the means.

The result of multifactor analysis of variance 2 x 2 ANOVA and Tuckey test of this research are described below.

*Table 4.11. Summary of a 2 x 2 Multifactor Analysis of Variance*

| Source of Variance | SS | df | MS | Fo | $F_{t(.05)}$ |
|---|---|---|---|---|---|
| Between columns | 540.57 | 1 | 540.563 | 4.304 | 4.00 |
| Between rows | 39.07 | 1 | 39.063 | 0.311 | |
| Columns by rows (interaction) | 1278.06 | 1 | 1278.06 | 10.175 | |
| Between groups | 1857.69 | 3 | 619.229 | | |
| Within groups | 7536.25 | 60 | 125.604 | | |
| Total | 11251.63 | 63 | | | |

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

a. Because $F_o$ between columns (4.304) is higher than $F_{t(.05)}$ (4.00), $H_o$ is rejected and the difference between columns is significant. It means that the teaching media differ significantly from one another in their effect on the reading skill of the subjects in the experiment. Then, because the mean of the students taught by using Moodle ($A_1$) (77.844) is higher than the mean of those taught by using Power Point ($A_2$) (72.188), it can be concluded that the use of Moodle is more effective than the use of Power Point in teaching reading.

b. Because $F_o$ between rows (0.311) is smaller than $F_{t(.05)}$ (4.00), $H_o$ is accepted and the difference between rows is not significant. It means that students' intelligence doesn't differ significantly from one another in their effect on the reading skill of the subjects in the experiment.

c. Because $F_o$ interaction (10.175) is higher than $F_{t(.05)}$ (4.00), $H_o$ is rejected and there is interaction effect between the two variables, teaching media and students' intelligence quotions. It means that the effect of the use of media on reading skill depends on the degree of students' intelligence quotient..

2. The Summary of Tuckey Test

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

*Table 4.12. The Summary of Tuckey Test Result*

| Between Group | Sample | $(q_o)$ | $(q_t)$ | $(\alpha)$ | Status |
|---|---|---|---|---|---|
| $A_1 - A_2$ | 32 | 4.037 | 2.89 | 0.05 | Significant |
| $B_1 - B_2$ | 32 | 1.472 | 2.89 | 0.05 | Not Significant |
| $A_1B_1 - A_2B_1$ | 16 | 1.085 | 3.01 | 0.05 | Not Significant |
| $A_1B_2 - A_2B_2$ | 16 | 7.107 | 3.01 | 0.05 | Significant |

The summary of the mean scores of reading comprehension is presented in Table 4.12. Here is the table for summarizing the mean of scores as follows:

*Table 4.13. The Summary of Score Means*

| Intelligence | Moodle $(A_1)$ | Powerpoint $(A_2)$ | Average |
|---|---|---|---|
| High $(B_1)$ | 74.625 | 76.775 | 76.125 |
| Low $(B_2)$ | 81.581 | 67.500 | 74.063 |
| Average | 77.844 | 72.188 | |

From the table, we can conclude that:

a. Because $q_o$ between columns (4.037) is higher than $q_t$ (2.89) at the level of significance $\alpha=0.05$, the use of Moodle differs significantly from the use of Power Point for teaching reading. Then, because the mean of $A_1$ (77.844) is higher than the mean of $A_2$ (72.188), it can be concluded that the use of Moodle is more effective than the use of Power Point in teaching reading.

b. Because $q_o$ between rows (1.472) is lower than $q_t$ (2.89) at the level of significance $\alpha=0.05$, the students having high intelligence and the students having low intelligence do not differ significantly in their reading skill.

c. Because $q_o$ between cells $A_1B_1$ and $A_2B_1$ (1.085) is lower than $q_t$ (3.01) at the level of significance $\alpha=0.05$, the use of Moodle doesn't differ significantly from the use of Power Point for teaching reading to the students having high intelligence.

d. Because $q_o$ between cells $A_1B_2$ and $A_2B_2$ (7.107) is higher than $q_t$ (3.01) at the level of significance $\alpha=0.05$, the use of Moodle differs significantly from the use of Power Point for teaching reading to the students having low

intelligence. Then, because the mean of $A_1B_2$ (81.581) is higher than the mean of $A_2B_2$ (67.500), it can be concluded that the use of Moodle is more effective than the use of Power Point in teaching reading to the students having low intelligence.

Refering to the findings above, it can be concluded in general that the use of Moodle is more effective than the use of Power Point in teaching reading.

**D. Discussion of the Result of the Research**

a. The use of Moodle is more effective than the use of Power Point in teaching reading to the students.

Moodle is one the computer's software package that is being developed to be used as one of media in teaching learning process. Moodle provides various features that are suitable to teach reading comprehension skills. Then, there is pleasure sense in this media because the materials can be presented in games in its activity, various exercises through quiz, and various types of questions like multiple choice, completion, gap-fill exercise, jumbled word or sentence, matching, and even essay, through the computer. The teacher can design the materials, the class activity, the exercises, and all contents of the Moodle that are suitable with the objectives of the teaching learning process. Because it can be connected to internet, the students are able to access and study the materials anytime and everywhere.

Besides, as it is stated by Brandl in Yates (2011: 18), the use of Moodle as media allows for the implementation of activities that support teacher-student, student-student, and student-technology collaboration. This makes the teaching learning more interesting. The students study the materials and practice the exercises confidently. The students become high motivated in attending the courses. Along the discussion, the students can have a chat or share the topic with the teacher or their friends through the feature of message, chat, or forum. If they have a problem they can consult to the teacher through these features too, or they can open the course containing the related materials directly.

These strengths of Moodle make it more effective than Power Point to teach reading in English lesson. Power point is also computer's software package

which provides slides showing the points of explanation for example to tell about genres of texts, supporting pictures, graphs, charts, and even hyperlinking to any files, videos, or webs. It will make the students easier to understand the topic or main idea of a text, get specific information which is stated and unstated, understand the meaning based on the context, know pronoun reference, identify the communicative purpose of the text, and catch moral value or the text message. The students can have the similar materials as all presented in Moodle, but in using Power Point they tend not to be the subject, but only play as objects, of the teaching learning process. The students do not involve in operating the computer. They will not be too active, only accept the explanation given by the teacher in the class. Power point is also suitable for teaching language, including reading skill, but teaching learning using Power Point tends to be teacher centered. The sources of their study are more limited, those are the teacher and whatever in their class' surrounding.

b. Students' intelligence doesn't differ significantly from one another in their effect on the reading skill.

The research finding shows that the students' intelligence doesn't differ significantly from one another in their effect on the reading skill, or the students having high intelligence do not always have better reading ability than those having low intelligence. It can be shown from the data that the students having high intelligence doesn't always get good mark. In contrary, the students having low intelligence can also gain good mark in reading test.

There are many factors being able to influence the students in reading skill mastery. The intelligence is not the only one making students' good mastery. The other ones not only can come from someone's internal factors, like: motivation, interest, learning style and strategy, creativity, and so on, but also can come from someone's external factors, like teaching approach, method, technique, or media, supporting facility, etc. The suitable ones may make both of students having high intelligence and those who have low intelligence have almost the same results in test. Moreover, as it has been discussed in chapter I, Ronis wrote in her book *Brain – Compatible Assessment* (2011: 55-56) that intelligence

includes the capability of learning and applying it in the daily life. Indeed, there is correlation between IQ and what can be learned and done in this real world. Otherwise, many cognitive researchers proved that intelligence is open system and dynamic so that it can be modified in every age and ability level. It means that the students' capability can be increased even in any level intelligence of the students'. Intelligence has a powerful genetic component, but there are a number of environmental aids and hindrances; a stimulating environment, parental encouragement, good schooling, spesific reasoning skills, continued practice, and so on, certainly help a person become more intelligent. A teacher must be creative, innovative, and able to understand the students' condition, and apply the suitable ways influencing the students' competence or achievement effectively.

c. There is an interaction between the use of media and the students' intelligence in teaching reading.

The use of Moodle is not more effective than the use of Power Point for Students having high intelligence. Rusman states in his book *Belajar dan Pembelajaran Berbasis Komputer* (2012: 302) that the biggest weakness of internet or web based teaching learning is the lack of direct interaction between the teacher and students. Eventhough they can communicate through live chat or discussion forum, the direct interaction cannot be subtituted, especially in teaching learning process. The use of Moodle forces students to work independently. Because of their freedom to browse widen information and knowledge through the internet connection, it was difficult for them to engage and focus to their materials. In this case, after the teacher gave the tasks, the students started doing the tasks indifidually, in pairs, or in group without getting much control from the teacher. Supported by the nature of the students having high intelligence to grasp information from any sources quickly that makes them get bored easily, Moodle is not more effective for them.

Knorr (2012) in her article *Characteristics of a High IQ* states that Gifted children and adults frequently have a broad range of interests and intellectual curiosity. Society expects more of those judged as highly intelligent and, in some

cases, the person's knowledge of his own capabilities may cause him to strive more and become a perfectionist. Ironically, if the need for perfectionism becomes too stressful or if she becomes bored by school or other routines, the person may underachieve. Further, it is also said that high intelligence is a risk factor for several feelings, two of them are anxiety and arrogant. Moodle is an open-souces e-learning based medium. When students having high intelligence feel that they have already learned the materials or read the texts provided in Moodle in the website, stimulated by their interest and curiosity to learn more or other, they will leave the materials, on which they should focus, to other knowledge or information. Thus, they can't keep studyng on one material without more teacher's guide and control, where as the repetition is needed in understanding more to a material.

Otherwise, the use of Power Point makes the students having high intelligence work convidently with the teacher's control and guide. Supported by their characteristics to be more able to acquire knowledge (i.e. learn and understand), apply knowledge (solve problems), and engage in abstract reasoning, the scores of theirs are higher than those having low intelligence's. The use of Power point makes the students get the teacher's explanation and guide most of their time in the class, strengthened by the powerful points of the materials given on the slides. According to Bruner in Nasution (1982: 9-10), the learning process involves three phases, they are information, transformation, and then evaluation. When a teacher use Power Point as the medium in a teaching learning, the students have a big chance to get them all proportionally. The teacher's full control make the students always engage to the class. Therefore, this medium can raise the students' concentration on their material. It can also make the students learn confidently since the teacher guide them all along the teaching learning process. This results in the students' better understanding, then achievement, on reading comprehension in English. That's why, the use of Power Point is more effective for the students having high intelligence.

On the contrary, the students having low intelligence are usually passive in attending the teaching learning process. They tend to study and comprehend the

lessons, or any materials slowly. But because of their awareness of this, they usually try and learn more than those having high intelligence. It raises the more motivation on them to learn something in order to get their success, not to fail in the class. As Nunan (1991:174) says "I find that motivation is vital to the success of learning a foreign language.". Motivation might also be defined as an energy change within the person characterized by effective arousal and anticipatory goal reactions (McDonald, 1909: 77). Further, Elliot (2000: 332) states that motivation is an important psychological construct affecting learning in at least four ways:

1. It increases an individual's energy and activity level. It influences the extent to which an individual engaged in a certain activity intensively or half-heartedly.

2. It directs individual to certain goals. It affects what people do and the results they achieve.

3. It promotes initiation of certain activities and persistence in those activities including in facing the difficulties.

This motivation affects the learning strategies. It increases people to pay attention to something, study and practice it, and try to learn it in a meaningful way. In the research, the low intelligent students' awareness of their weaknesses and the importance of reading skill made their motivation to learn and learn more. It is like what Harmer (1998: 8) says:

> Whatever we think of the teaching methods used_or the reasons for the language learning- the teachers and the students in this cases had a number of things on their side: they were highly motivated, they really wanted to learn and they had powerful reasons for doing so-including, of course, a fear of failure.

The use of Moodle is more effective than the use of Power Point for students having low intelligence. By using Moodle, the students having low intelligence can master the materials optimally because it gives more chances to them to repeat their study every where and every time they need or want. It also gives the possibility to the students having low intelligence to work individually and confidently as the consequence of the teacher-student, student-student, and student-technology collaboration. Those students don't always face the teacher, or

their classmate, so they don't feel ashamed when they make a mistake, or get a bad result on the evaluation. It then raises their motivation to repeat and study the materials more.

In using Power Point, however, the teaching learning is still limited by the classroom. As it is discussed in Chapter II, Students having low intelligence will comprehend the materials, here for example English texts with their reading comprehension questions, more difficult and slowly than students who have high intelligence. It is related to the characteristics of low intelligent students who are usually unable to grasp information, remember information, juggle multiple things, concentrate on one thing, apply solutions on problems, devise new solutions, and imagine something better than students with low intelligence easily or fast. In the classroom, with teacher-centered teaching learning, they will be ashamed to make mistake and then have no self confidence to study the materials more. It will make those students more passive in the class. As the concequence, they will not get optimal achievement or mastery on the materials. Thus, the use of Power Point is not effective for students having low intelligence.

Refering to the explanation above, it can be concluded that there is an interaction between the use of media and the students' intelligence in teaching reading.

## CHAPTER V
## CONCLUSION, IMPLICATION, AND SUGGESTION

### A. Conclusion

Based on the description of the data analysis, the research findings are:

1. The use of Moodle is more effective than the use of Power Point for teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

2. Students' intelligence doesn't differ significantly from one another in their effect on the reading skill of the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012

3. There is an interaction between teaching media and students' intelligence in teaching reading to the first grade students of SMA Negeri 2 Purwokerto in the Academic Year of 2011/2012.

The result of the research implies that Moodle is an effective teaching medium for teaching reading. There was a cause and effect relationship between teaching media and students' intelligence toward reading achievement.

### B. Implication

Referring to the findings, it can be seen that generally the use of Moodle is more effective than the use of Power Point to teach reading in English class. Therefore, it is good for teachers to use Moodle as medium in their class. This medium has to be implemented, especially by English teachers to teach reading skill, in order to achieve optimal result. By applying this medium, the teachers play key roles as facilitators of favorable interactions rather than as dominators during teaching and learning process. The students are so involved in the activity of the class that the students can explore their prior knowledge connected to the concept of the text. It can be applied by the teacher to improve their intelligence. Both of the students with high intelligence and low intelligence will be motivated in learning, as they have to study more seriously.

Basically, there are three stages needed to be done in order to implement Moodle in the class, they are opening, classroom extract, and closing. The class

can be opened by greeting, checking the students' attendence or absence, stating the objectives of the teaching learning, and discussing the benefit of the teaching learning. Classroom extract is the main activity which includes Pre-Reading, Gist-Reading, and Post-Reading. Pre-Reading consists of Registering to Moodle, Setting the Moodle, Selecting the class activity provided in the Moodle, then following the steps in the class activity, and also Building interest, that is asking and answering questions related to the topic, digging up what the students know about the topic. In Gist-Reading, there are Studying the texts in the module provided in Moodle course; the genre, generic structure, language features and all about the texts, Studying the vocabulary used in the texts, checking their reading comprehension skills through Moodle quizzes, sharing the discussed topic with friends and the teacher via chat forum, message module, journal module, feedback module in Moodle or via direct answer-question in the class, opening other sources (sites, web, and so on) through internet, doing the Moodle quizzes for intensive reading, and discussing the answers. After that, students do Post-Reading, those are drawing conclusion and doing exercises in Moodle assignment for extensive reading. To close the class, there should be giving summary, interactive session, the time for students to ask a question, reflecting the teaching learning, and saying goodbye.

Moodle is an open sourced e-learning medium, so that there will be some defisiencies in running a class using it. Before starting, the teacher must prepare any thing maybe needed well, like the electricity, the uploaded materials, the internet conection, and soon for a successful class. Besides, a teacher should control intensively the students' activity in the teaching learning process, in case they open unneeded sources not related to the discussion of the class. The teacher cannot just stay in front of the class, but has to move around the class and always keep watching each student's activity.

A teacher must be creative, innovative, and able to understand the students' condition, and apply the suitable ways influencing the students' competence or achievement effectively. By using Moodle as medium, supported by suitable techniques or stages, it is hope that the students will be so self

confident and high motivated that this mediun can really have good influence on their learning achievement especially of reading skill in English.

**C. Suggestion**.

1. For Teacher

 a. Because of the use of media influence on students' achievement, it is good for the teacher to use various media in delivering a materials in the class. Based on the result of this research, it is good for teacher to use Moodle as teaching media for students having low intelligence and Power Point for students having high intelligence. The suitable media can make the students have higher motivation to learn more and more. Therefore, the use of Moodle is good to be applied in the class by considering the students' intelligence quotient.

 b. A teacher should not consider the intelligence quotient as the only critical factor that can influence the students in a teaching learning process. A teacher must be creative, innovative, and able to understand the students' condition, and apply the suitable ways affecting the students' competence or achievement optimally.

2. For Students

 a. The students are supposed to be more active in teaching learning process in order to improve their understading on the materials of their subjects, one of them is on reading comprehension.

 b. For those who have lack of reading ability, they must encourage themselves to read a lot everywhere as long as there is a chance and time to do it. It will bring maximum achievement in reading comprehension.

3. For Other Researchers

 a. Other researchers can use the result of this study as the starting point to conduct similar research to different students' conditions in another location.

 b. It is also possible to conduct a similar research to a different population characteristics for a betterment.