

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents the references from experts which are useful to give relevant knowledge in the field of the study for the next chapter. This chapter describes theories and reviews some relevant research findings. These explanations can be shown as follows:

2.1. Definition of Reading

Reading can be defined as a set of activities in teaching learning which is done to relieve uncertain meaning and get information from the text. It is supported by Grabe and Stoller (2002) stated that reading is a way to draw information from the printed page and interpret the information appropriately. Furthermore, they stated that idea of reading also to do with purpose, experiences, strategies, skills, and even attitude towards reading. It means that reading facilitates a writer to share knowledge, ideas and feelings with reader, where both of them have their own language patterns and experiences.

According to Klinger, Vaughn and Boardman (2007) reading is a process of constructing meaning that can be achieved through dynamic instruction suggested by the text, and the context of the reading situation. It is also supported by McEntire (2003) who defined that reading as a constructive process which the prior knowledge and experience are important to get proper understanding of the information in a text.

2.2. Purpose of Reading

As we know, reading has an essential role in gaining an information, not only that, the reader also should know what is actually her/his purpose in reading. According to Smith (2004), the meaning of reading does not hang on what the reader reading is but his purpose of reading.

One of the keys to reach comprehension is by knowing the goal of reading. Grabe and Stoller (2002) stated that reading has four objectives in general: 1) to look for the simple information and reading to skim, it means the readers classically scan the text for specific information and skim the text for general understanding. 2) To learn from the texts, it arises in the contexts of academic and professional that the readers require to study a number of information from the text. 3) To integrate information, write and criticism the texts, which require the additional decision of the readers about the significance of the information from some sources, especially supporting one, and restructuring their own concept. 4) reading for general comprehension, the readers require to have ability in arranging the general meaning that represents of the core ideas.

By some explanations from the experts above related to the reading purposes, it can take the conclusion that the reader should know their goal of reading before they get the comprehension of the text itself, even it also look for simple, skim, learn, write, critique the information for general comprehension.

2.3. Pronunciation in Reading

The areas of learning English matter in reading is pronunciation. When we read a text, you are actually saying the words to yourself inside your head as part

of the process of storing them. The target of communication among people could be reached without any obstacles. Clear pronunciation gives speakers the power to be confident when expressing and indicating themselves in communicating with others (Zaigham, 2011). Whereas, mispronunciation will lead misperception among them.

Pronunciation is an integral part of foreign language learning since it directly affects learners' communicative competence as well as performance. Poor communication skills can decrease learners' self-confidence, restrict social interactions, and etc (Akyol, 2012). Besides, pronunciation is the production of certain sounds that is used for making meaning (Gilakjani, 2016, Richard & Schmidt, 2002).

2.4. Teaching Reading

According to the book of *Teaching by Principle*; second edition (Douglas Brown, 2001), reading ability will be developed best in association with writing, listening, and speaking activities. Led by Goodman's (1970) work, the distinction between bottom-up and top-down processing became a cornerstone of reading methodology for years to come. In bottom-up processing, reader must first recognize a multiplicity of linguistic signals (letters, morphemes, syllables, words, phrases, grammatical cues, discourse markers) and use their linguistic data processing mechanics to impose some sort of order on these signals. In top down processing, we draw on our own intelligence and experience to understand a text.

More recent research on teaching reading has shown that a combination of top-down and bottom-up processing, or what has come to be called interactive reading, is almost always a primary ingredient in successful teaching methodology because both processes are important. “In practice, a reader continually shifts from one focus to another, now adopting a top-down approach to predict probable meaning, then moving to the bottom-up approach to check whether that is really what the writer says” (Nuttall 1996).

According to the syllabus of SMK YPI Darussalam 1 Cerme, the researcher concerns on the material about recount text which is used in the application:

Menganalisis fungsi sosial, struktur teks, dan unsur kebahasaan beberapa teks recount lisan dan tulis dengan memberi dan meminta informasi terkait peristiwa/ pengalaman sesuai dengan konteks	Mengidentifikasi fungsi sosial, struktur teks dan unsur kebahasaan dalam teks recount sesuai dengan konteks penggunaannya. Membedakan fungsi sosial, struktur teks dan unsur kebahasaan dari teks recount sesuai dengan	Teks Recount a. Fungsi sosial: Untuk menceritakan kejadian di masa lampau b. Struktur Teks: Teks Recount - Pembuka - Peristiwa - Penutup	9	Mengamati teks recount lisan dan tulis; Menganalisis fungsi sosial, struktur teks dan unsur kebahasaan tentang teks recount yang terdapat dalam teks; Mengumpulkan data mengenai fungsi sosial, struktur teks dan unsur kebahasaan dari teks recount	Pengetahuan: Tertulis Keterampilan: Unjuk Kerja Portofolio
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penggunaann ya	konteks penggunaannya.	c. Unsur Kebahasaan : <ul style="list-style-type: none"> - Kosakata: yang terkait dengan topik - Grammar: Simple Past Tense - Ejaan dan tanda baca yang jelas, rapi dan tepat - Ucapan, tekanan kata & intonasi ketika mempresenta sikan secara lisan 		Mendiskusikan dan menganalisis fungsi sosial, struktur teks dan unsur kebahasaan dari berbagai teks recount Mengkomunikasik an informasi dan isi dari teks recount dengan menggunakan struktur teks dan unsur bahasa yang tepat sesuai konteks penggunaan
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2.5. Reading Error

Understanding Errors in Reading especially Reading aloud in English is a type of reading competence that demands stringent requirements because if students misread aloud then a message in the text will not be conveyed to the listener and there will be confusion of meaning (Farida: 2005). Reading aloud is a

continuation of reading the beginning. At the beginning of reading the pressure is on the smoothness and accuracy of voicing letters, on reading aloud is focused on word pressure, sentence songs or intonation, pauses, and mastering punctuation. The four must be right. If this accuracy is ignored, students will have difficulty when reading silently or reading intensively. They can only read but find it difficult to understand what is contained in the reading. In English the skill of reading aloud does not only refer to the 4 aspects above, but also no less important is mastery of pronunciation techniques must also be owned so that reading errors do not occur and change the meaning in the reading. Students usually use their local language in daily life as the mother tongue. Furthermore, Baker (1982) says every student has a different mother tongue, different pronunciation problems, especially at the beginner level.

From the explanation above, it would be enough to explain that the error of reading in English is more referring to the mastery of the pronunciation. Making mistakes in pronouncing English as a foreign language is common. It is natural in the early stages of the second / foreign language learning process. In teaching pronunciation, the instruction goals tripled: to enable our students to understand and be understood, to build their confidence in entering into communication situations, and to enable them to do so monitoring their sayings based on input from the environment, Goodwin (2001).

2.6. Developing Assessment for Pronunciation in Reading

In this research, the researcher uses technology to develop the assessment. Assessment means the process of collecting evidence and making judgments on

whether competency has been achieved, to confirm that an individual can perform to the standard required in the workplace (Standards for Registered Training Organizations, 2015). There are three steps to develop assessment, those are:

2.6.1. Plan

Plan means what are the assessment requirements of the training package (Standards for Registered Training Organizations, 2015). The researcher should know what the need analysis of the assessment itself. It is required to have target needs and learning needs of the students before creating what the tasks are. This is step is similar to analyze step of ADDIE model. According to Songhori (2008) stated that need analysis has a crucial role in the process of designing and carrying out any language course, weather it is as an English Specific Purpose (ESP) or general English course. Need analysis developed based on identification needs of the students and the learning environment. In the other word, Hutchinson & Waters (1992) also defined needs analysis on the basis of “necessities” and “wants” in order to classify between what the learners have to know and what the learners feel they need to know.

2.6.1.1. Target Need

According to Hutchinson & Waters (1987) target need is an analysis in which it should be investigate in order to find about what are actually the students need to do in target situation. They also stated that in order to know how to analyze the target need of the learners. There are three cases that should be attention, those are: necessities, lack and want.

a. Necessities

This aspect is about what is the students need in target situation. For example: in order to be a teacher, students have to master the topic that will be delivered, have ability to manage the class and how the way to deliver material.

b. Lacks

This aspect is about what the students already know and not yet. The teacher can consider what necessities are missing. Lack also can be defined as the abilities or competencies that are not possessed by students to get the best performance in target situation. For example: English writing aspect that students know yet that Indonesian writing aspect.

c. Wants

This aspect is about what the students want in learning target language. For example: about the material, the teacher has to give material that appropriate with students' expectation.

2.6.1.2. Learning Need

Students are the main system in a teaching process. They are not only the participants that only receive everything that was given by teacher. Analyzing learning need is important in order to get more information about the students. Hutchinson & Waters suggest a framework for analyzing learning needs which consists of several questions, each divided into more detailed questions. The framework proposed by Hutchinson & Waters (1987) for analysis of learning needs are why are the students taking the course?, how do the students learn?, what sources are available?, who are the students?. Those questions are needed to know the students' condition also their need in the process of learning.

2.6.2. Design and Development

Design is the second step of developing assessment. This phase is really about the instruction. In design phase the instructional designer involves and focuses on designing assessment for researcher topic, select a form of the course, and creating their own instructional strategy.

According to curriculum which is used by SMK YPI Darussalam 1 Cerme Gresik, *KTSP (Kurikulum Tingkat Satuan Pendidikan)* then the researcher uses Students- Centered Learning (SCL) as an instructional approach to influence content, activities, materials and pace of learning.

Student-centered learning models personalize learning with the use of competency-based approach, supported by blended and online learning modalities and environment, as well as extended learning options and resources (Students-Centered Learning, 2016).

The student-centered approach takes its roots from the constructivist theory. Constructivist is essentially the educational philosophy that “students learn more by doing and experiencing rather than by observing” (Brown, 2008).

The next step is Development phase which the instructional designers integrate the technology with the educational setting and process. Also, keep in mind the backup plan in case that the technology that we choose does not work. For example, if we consider Google research to find some information about what the word Ancient civilization means and the Internet does not work, we have a backup, which is PowerPoint presentation. Moreover, the instructional designer starts to develop and create a good quality factual.

2.6.2.1. Sound

Sound is a longitudinal mechanical wave type generated by the vibration of an object and can be detected by the ear. Sound occurs due to the vibration of each substance. The substance can be air, water, wood, or other materials. The only place where the sound cannot propagate is a vacuum chamber. When the substance to vibrate or move back and forth quickly, they produce sound. Ear we gather these vibrations and allows us to interpret. A sound wave can be described by frequency and amplitude. Frequency of 1 Hz means one complete wave cycle every one second. A unit of frequency is Hertz (Hz). Frequency that can be captured by the human ear is between 20 Hz to 20000 Hz. The amplitude of a wave refers to the amount of pressure change and the severity level (loudness) of sound waves. (Gunawan, 2009)

Sound waves vary as the pressure variation intermediary medium such as air. Sound created by the vibration of an object, which causes the air around it vibrate. This then leads to air vibrations human eardrum vibrate, which is then interpreted by the brain as sound. Sound waves travel through the air mostly in the same way as water waves travel through the water. However, because the waves are easy to see and understand, it is often used as an analogy to illustrate how the propagation of sound waves.

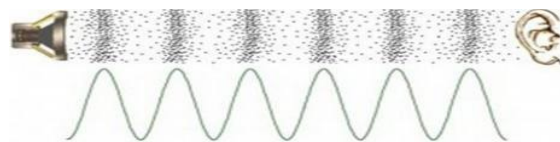


Figure 2. 1 Propagation of Sound Waves Process

Each air molecules move on a small distance as vibration, but the resulting molecules vibrate all affected runs adjacent to the ear. All waves must have had

three important properties for audio work includes: wavelength, amplitude and frequency. Sound waves can also be shown in the graph as shown in Figure 2.2.



Figure 2. 2 Graph Sound Waves

Sounds that can be understood can be interpreted in the language. Simply put, the language can be interpreted as a means to convey something that came to mind. However, further language of the language is a tool to interact or tools to communicate, in a sense means to convey thoughts, ideas, concepts or feelings. In the study sociolinguistics, language is defined as a system of symbols, such as sound, somewhat arbitrary, productive, dynamic, diverse and humane.

Language is a system, that is, the language is formed by a number of components that are fixed and can be patterned. Systems language sounds in the form of symbols, each symbol language symbolizes something called meaning or concept. Because each symbol sounds that have or express a concept or meaning, it can be concluded that every utterance language has meaning. Examples of languages emblem that reads "rice" represents the concept or meaning 'something that is commonly eaten as a staple food of people'.

In the pronunciation of the language, according to (Isaac and Yustinah, 2008), there are a few things to note:

2.6.2.1.1. Pronunciation

The pronunciation is the way a person or group of people in the community say the sounds of language. Pronunciation of sounds in speech spoken Java

community is different from Sumatra. **T y p e s o f P r o n o u n c i a t i o n** that we have to know t h a t a r e ; vowels, consonants, diphthong, and combined consonants as follows.

- a. Vowel denoted by the letter a, i, u, e, o.
- b. Consonant denoted by the letter b, c, d, f, g, h, j, k, m, n, p, q, r, s, t, u, v, w, x, y, z
- c. Diphthong denoted by the letter oi, ai, au.
- d. Combined consonant denoted by kh, ng, ny, sy.

2.6.2.1.2 Intonation

Intonation is the pronunciation using good vocal pitch election, one can understand what the intent of the person who spoke to him, so there is no misunderstanding. Intonation is also a blend of pressure and pause that accompanies a speech from the beginning to the last termination. Intonation is influenced by the level of tone and gentle pressure on the harsh sentence. Example: the pronunciation of the two sentences below to understand the differences in intonation in sentences.

- a. Go! (Intonation rises)
- b. They arrived this morning. (Intonation flat)

2.6.2.1.3. Pressure

a. Dynamic pressure

Dynamic pressure is intense pressure to provide a focus on a word that can be a particular concern for the listener. The function of dynamic pressure is as follows:

- Leading up opposition
- Change subject
- Mention some types of objects or things in a row
- Concerned pressure the emphasis on the word b. Tone pressure

Tone pressure ie, high-low sounds utterance in a speech that serves to express the feeling of the atmosphere of the speaker.

Example: "Huft, this day really exhausting." (Pronounced with a low voice)

b. Tempo pressure

Tempo Pressure that is, spoken slowly pressure on some important words to the attention of the listener.

Example: "B-E-S-O-K will be held a meeting with company officials." (The word "tomorrow" is pronounced with a slow tempo.)

2.6.2.1.4. Pause

Pause is temporary stops on speech. Pause is usually marked by a comma (,), period (.), Semicolon (;), colon (:), question mark (?), And the exclamation mark (!)

2.6.2.2. Speech recognition

Speech recognition is a system used to recognize voice commands from a human word and then translated into data that is understood by computers. The advantage of this speech recognition, among others, is the speed and ease of use. Word - a word that can be captured and identified as the end result, for an application such as command and control, data entry and document preparation. Parameters were compared was the level of noise suppression which will then be

matched with a database template provided. While the voice recognition system is based on those who spoke called the speaker recognition. But the complexity of the algorithm is implemented speech recognition simpler than the speaker recognition.

Speech recognition is also a development of techniques and systems that enable the computer to accept input in the form of the spoken word. This technology allows a device to recognize and understand the words spoken by way of digitizing the word and match the digital signal with a certain pattern stored in a device. Words spoken transformed into digital signals by converting sound waves into a set of numbers which are then tailored to the specific code to identify the words. The results of the identification of the spoken word can be displayed in written form or can be read by the device technology as a command to do a job, for example, pressing a key on the handset that is done automatically with a voice command. At this time, speech recognition is used to replace the role of the keyboard and mouse input.

2.6.2.2.1 The types of speech recognition

In the development of speech recognition technology is part of the voice recognition (process of identifying a person based on his voice). Voice recognition itself is divided into two, namely the introduction of the speaker (voice identification by people speaking) and speech recognition (voice identification is based on the spoken word).

Based on the ability to recognize spoken words, there are 5 types of word recognition, namely:

1. Words isolated

The identification of words that can only recognize the spoken word if the word has a lag time between the pronunciations of the word

2. Words related

The identification of words similar to the words of isolation, but requires a time lag between the pronunciation of shorter words

3. The words sustainable

The identification of a word that is more advanced because it can recognize words spoken on an ongoing basis with a time lag that is very little or no lag time. Voice recognition process is very complicated because it requires a special method to distinguish the words uttered without any lag time. Users of these devices can pronounce words naturally.

4. Words spontaneous

The identification of words that can recognize words spoken spontaneously without the lag time between words.

5. Verify or voice identification

The identification of words that are not only able to recognize the word, but also identify who is speaking.

2.6.2.3. Programming Mobile

The increasing number of smartphones with various operating systems in them, one of the reasons why mobile programming has a good prospect for the future. In some mobile platforms that can be used include Android, Blackberry OS, iOS, Nokia OS, Palm OS, Symbian and Windows Phone.

Some of the programming languages used for mobile devices such as:

1. J2ME
2. C ++ framework in symbian
3. Flash Lite
4. Objective
5. C ++ in Brew framework (used for HP CDMA)
6. C # .NET (Windows Mobile)
7. JavaFX Mobile
8. PHP

Programming for mobile devices has its own rules. Programming in J2ME (Java 2 Micro Edition) is already popular in terms of programming for the equipment in a small size. There is also a BREW (Binary Runtime Environment for Wireless) created by Qualcomm for mobile phones. Originally developed for the BREW CDMA, to download (download) and can run small programs such as games, sms, photos and more. Limitations are very common in programming languages for mobile devices is a constraint in all respects resources, such as screen size, memory, CPU, storage and how to enter the data. Differences in views are also attributed to differences in hardware and APIs used.

2.6.2.3.1. XAMPP

Xampp is software support for the review many operating system, which is a compilation from several programs that understanding. Xampp function as a Server That Was Alone Stand Alone (localhost), which comprises several between Program include: Apache HTTP Server, MySQL database, and translator written

with php and perl programming languages. Xampp name is an abbreviation From X (four in the operating system), Apache, MySQL, PHP and Perl. Singer Program Number: Available hearts gnu general public license and free prepaid, web server is an easy to use the can review displays dynamic web page to obtain them xampp can download directly from its official website and here are some other program definition the hearts are xampp.

Apache HTTP Server is a web server running on the many who can operating systems like (unix, bsd, linux, microsoft windows and novell netware platforms as well as the other) that is useful to review the functioning serve and web site. The protocol used for the review serving been used web.

MySQL is a software sql database management system (English: a database management system) or dbms its multithreaded, multi-user, with approximately 6 million installations worldwide. mysql ab make a quantity: available as free software under the gnu general public license (gpl).

Phpmyadmin is a free software written in php programming language which was used to handle the administration of mysql through a review network (world wide web). Phpmyadmin mysql supports the different operations, including: (manage databases, tables, fields (fields), relation (relationship), indexes, users (users), licenses (permits), and others) .in essence, managing database that mysql should be performed by the way to type in commands suitably (command line) to review every specific purposes. if making want someone basis of data (databases), type the command line make appropriate for review database. if someone delete table, type the command line appropriate to delete table. it is certainly very difficult because only someone must memorize and type in the command one by one.

Many previous currently once software can be used to review the hearts manage mysql database, phpmyadmin is prayer only. search google articles phpmyadmin, someone can make database, make tables, data charge, and others with easily, without having to memorize the command line.

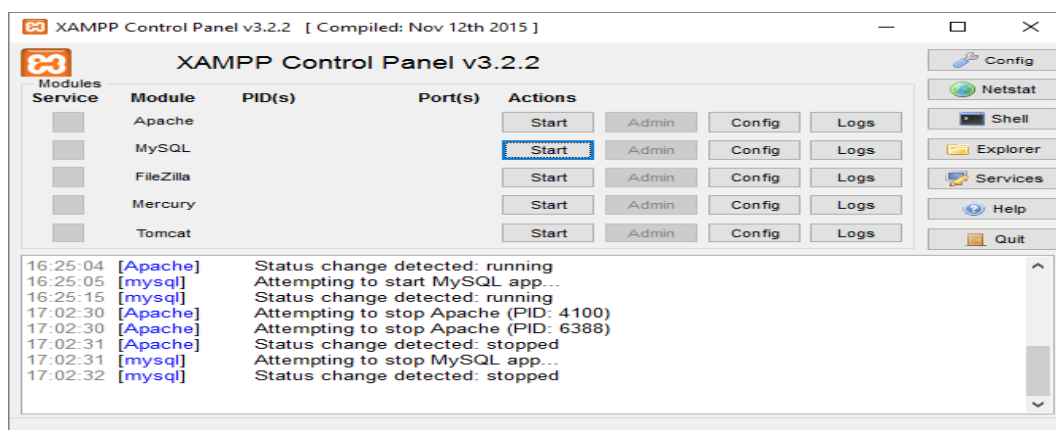


Figure 2. 3 XAMPP

Phpmyadmin is a section for review managing the mysql database the on the computer. To open it, open your browser then type the address `http://localhost/phpmyadmin`, so will appear phpmyadmin page. in situ later someone can make a new way of data, and manage it.

2.6.2.3.2. Notepad++

Notepad ++ is a useful developer application program for editing text and script programming code. The latest version of this program is Notepad ++ v5.9, which was released on 06 April 2012. Software Notepad ++ is created and developed by Team Notepad ++.

Computer software has advantages on improving the ability of a text editor program, rather than the default Windows Notepad program. Notepad ++ can recognize tags and code in different programming languages. Features advanced

search and text editing is available is also quite powerful, very helpful task of a programmer or developer to resolve the code scripts.

Notepad ++ widely applied and used by computer users in the field of desktop and web application programming. Notepad ++ is a free software (open source). Notepad ++ can run on Win2K operating system, Windows XP, Vista, and Windows 7. To install the latest version of this program, your Windows computer has enough capacity of at least 12 MB free hard drive space.

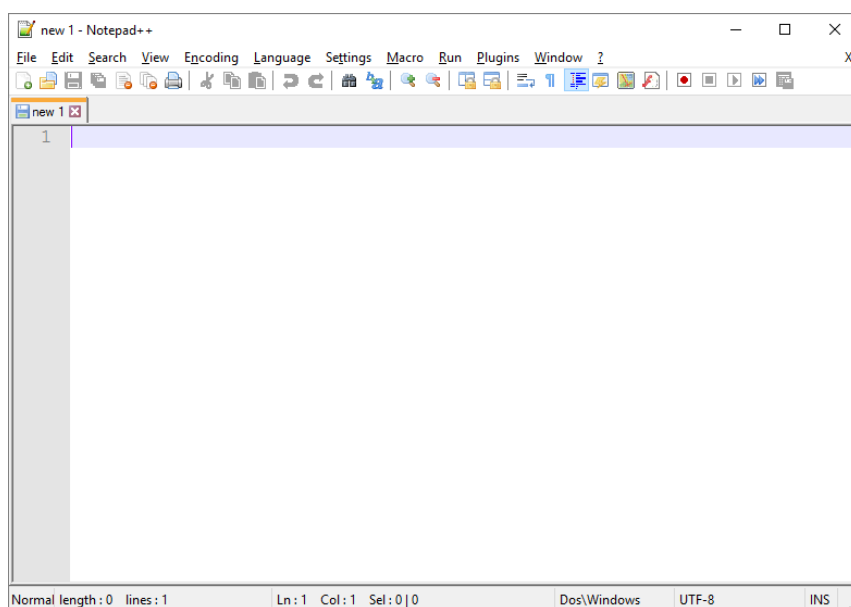


Figure 2. 4 Notepad ++

2.6.3. Quality Checks

The researcher should undertake several checks before implementing a new assessment tool. This step is aimed to measure up the appropriateness of the product professionally. By involving the experts in the process, the product would be even much reliable. Moreover, the experts can check the mistake or error in the product which could be minimized. This step is also called as validation.

2.7. Reading Error Detector

The teacher usually assesses the students' ability to read aloud manually recording time and accuracy, and calculates metrics such as correct words per minute. This 1-to-1 procedure can be very time consuming, especially if additional performance metrics are desired. Manual evaluation is not consistently the same and depends on the evaluator's habits and experience. An automated scoring system that can perform these steps accurately will be a good solution for conventional valuation methods and an indispensable tool for teachers who have a large number of students in the class. Automatic reading of hard reading might also help to detect reading disorders and find certain problems.

Reading Error Detector is a technology and method that is inherently connected to an application such as, for example, students read and then tracked automatically to written text and wrong pronunciation detection is detected. Before the Reading Error Detector there are several studies that aim to make assessments read automatically like LISTEN (Mostow et al., 1994), Tball (Black et al., 2007), SPACE (Duchateau et al., 2009) and FLORA (Bolaños et al., 2011). It is emphasized here that this project is concerned with evaluating the measurement of oral pronunciation errors, and no effort has been made to measure understanding of what is being read. However, there is evidence that smooth oral reading is an indicator of overall reading competence (Fuchs et al., 2001).

2.8. Previous Research

As a consideration, in this research will be listed some research relevant to the issues discussed, including as follows:

Yudhi Arifani (2015) in the research of development of prototype material and evaluation instrument of learning integrated English reading skills based on computer assisted language learning (PamanPinters -CALLS) for high school is done through research of R & D development which integrates various learning media in one place. This study made various types of material in reading and evaluation of each element in reading, so that the material and evaluation can be integrated. Then the results can be relevant in assessing the reading technique.

Titin Rahmawati Amalia (2013) in her thesis entitled "Development of Learning Media Using Audio Visual Based Events Local History in Madiun". The instructional design used in developing media is the ADDIE design. Preparation of data for media developed by utilizing windows movie maker software, then obtained the final product in the form of video. Data collection is done by interview, observation, questionnaire, and test. Interviews and observations were analyzed. The conclusion is: IPS subject teachers in SMP N 2 Jiwan, Madiun Regency still use conventional methods by lecture and question and answer and use of learning media with ADDIE is still minimal. Post test results show group learning achievement using learning media developed > group learning achievement using power point (85 > 66,67). Therefore it is concluded that the group that uses audio visual media has better learning achievement than those using power point media and audio visual learning media developed is considered effective in improving learners' learning achievement.