CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents the discussion about Theory description of teaching media, multimedia, Adobe Flash CS3, and Previous Study.

A. Teaching Media

Media is every tool to convey information or messages from one place to another place. In teaching learning process also use media to make the process run effective and interesting. This part describes definition of teaching media, function of teaching media, and kinds of teaching media.

1. Definition of Teaching Media

Generally, teaching media mean all tools which may be used by teacher to deliver teaching material to students in teaching learning process to reach certain learning goals.

There are some experts that stated about teaching media. According to Bakri (2011:3) media is plural form of *medium*, which derives from Latin word *medius* that has meaning "*middle*". In Bahasa, *medium* means "*between* or *interval*". The meaning of media aimed at something that delivers information (massage) between message sender and receiver.

Teaching media based on Arsyad (2009:4) is a media that bring instructional purpose of massages or information of learning. Media is means of expressing massage and information. According to Heinich, et

al in Nurrochim (2013:17-18) stated that medium as a mediator that delivers information between sender and receiver. When the media brings instructional messages or information that contains learning purposes, it can be called as teaching media.

Meanwhile, Gerlach and Ely in Bakri (2011:3) divide teaching media in wide meaning and narrow meaning. Media in wide meaning is people, material or event which can create condition so that students can get new knowledge, skill or attitude. In this meaning teacher, book, and environment is included in media. While media in narrow meaning is graphic, photo, picture, mechanic and electronic tools that use to express, process and also convey visual and verbal information. In addition, Briggs in Aniqotunnisa (2013:10) stated that teaching media is all physical form that can convey message and can stimulate students to learn.

According to Arsyad (2009:6-7), teaching media has some basic criteria, those are:

a. Teaching media has physical meaning that called by hardware. The hardware is an object that can be seen, heard, and touched by five senses.

b. Teaching media has non-physical meaning then we called it software that is the massage which wants to deliver for pupil in hardware.

c. The emphasizing of teaching media is in the visual and audio.

d. Teaching media is a tool to help teaching-learning process both inside and outside class.

e. Teaching media used to communicate and interact between teacher and students in teaching-learning process.

f. Teaching media can be used massively (for example: radio, television) big group and small group (for example: film, slide, video, OHP), or individual (e.g.: module, computer, video recorder)

g. Attitude, act, organization, strategy, and management that related with application of certain knowledge.

Based on the definition above, it can be concluded that the media relates to technique, method in teaching and learning process. In other word, media is all aids/tools which may be used by teacher and learner to attain certain education objectives.

2. The Function of Teaching Media

The importance of using media for teaching is a media that can be used to help the students in their study, in order to make the teaching learning process more effective and efficient. By using media, the material is more interesting concrete and easier to understand.

According to Sudjana (2001:64) the function of teaching media in teaching and learning process as follows:

a. The using of media in teaching learning process is not addition function, but has own function as an aid to express effective teaching learning situation.

b. The using of teaching media is integral part of all learning situation. It means that teaching media is one of element that should be developed by teacher

c. The using of teaching media is more important to accelerate teaching and learning process and help student in comprehend material from teacher.

In addition teaching media function based on Mulyani in Dewi (2012:13) are:

a. Auxiliary tool to create effective learning situation.

b. Integral part of all learning situation.

c. To concrete the abstract concept, so, can decrease verbal comprehension.

d. To build up students' motivation to learn.

3. **Kinds of Teaching Media**

As we know that teaching media is all tools/aids that may be used by teacher and learner to attain certain education objectives. Then the teaching media can be divided into some classification.

According to Mahajan (2012:6-7), media are classified into seven categories such as:

a. *Graphic Media:* any kinds of printed media. Such as, books, pictures, photographs, maps, charts, posters, graphs, diagrams.

b. *Display Media:* a board used to show information in small group, e.g., chalkboard, bulletin board, flannel board, and peg boards.

c. *Three Dimensional Media:* A the medium that has 3D shape. For example, models, objects, specimens, puppets.

d. *Projected Media:* a kind of media that need projector to show the messages. For example, slides, filmstrips, transparencies, films, video tapes, gramophones, records.

e. *Audio Media:* media that just can be heard. Such as, radio, audio cassettes, gramophones, records.

f. *Video Media:* this media is combination between audio and visual, e.g., TV, videocassettes, CD, computers.

g. *Activity Media:* media that can act some activity. For example, fieldtrips, dramatization, demonstration, and role-playing.

Based on Sahid (2010:3) teaching media can be grouped as follows:

a. *Visual Media*: the media which can show information that just can be seen and read. For example: picture, photo, graphic, diagram, poster, cartoon, comic, book, etc.

b. *Audio Media*: the media which can show information that just can be heard. For example: radio, tape recorder, language laboratory, MP3 player, etc.

c. *Projected Still Media*: the media that need projector to show the information which inform of no-motion picture/writing. For example: Power Point slide, micro film, etc.

d. ***Projected Motion Media***: the media that need projector to show information inform of motion picture/writing. For example: film, television, video (VCD, DV, VTR), computer, etc.

The other classifications of teaching media also stated by Leshin, et al in Arsyad (2009:36) those are: (1) Human-based media (teacher, instructor, role-play, group activity, field-trip); (2) Printed-based media (book, guide line, workbook, paper); (3) Visual-based media (video, film, slide-tape program, television); and (5) Computer-based media (interactive video, hypertext). In addition, Rusman in Kusantati, et al,. (2014:38) classified teaching media into six kinds, those are: (1) Visual media, (2) Audio media, (3) Audio Visual media, (4) Group presentation media, (5) Object media, and (6) Interactive computer-based media.

4. **Teaching Media Evaluation**

It is important to have good planning in developing teaching media. The evaluation of teaching media especially interactive or multimedia based teaching media is for measure or evaluates the quality of the media. According to Walker & Hess in Arsyad (2009:175-176) criteria of teaching media evaluation are:

a. Quality of content and objective:

1) Accuracy;

2) Importance;

3) Completeness;

4) Balance;

5) Interest;

6) Justness;

7) Suitability with students' situation.

b. Instructional quality:

1) Give learning opportunity;

2) Give helpfulness to learning;

3) Motivation quality;

4) Instructional flexibility;

5) Relationship with other learning program;

6) Social quality of instructional interaction;

7) Testing and evaluation quality;

8) Give impact to students;

9) Give impact to teachers and their teaching learning process.

c. Technical quality:

1) Readable;

2) Easy to use;

3) Lay out quality;

4) Treatment of answer quality;

5) Program management quality;

6) Documentation quality.

Then based on Wahono in Waryanto (2008:5-7) criteria of multimedia interactive evaluation are:

a. Software engineer aspect:

1) The effectiveness and efficient in development and the using in teaching media

2) Reliable

3) Maintainable (easy to manage)

4) Usability (easy to use and operate)

5) The accuracy to choose application/software/tool in development

6) Compatibility (teaching media is easy to install in all kinds of hardware and software)

7) Easy to execute

8) Completeness of documentation teaching media program, include: install guide (clear, brief, and complete), trouble shooting (clear, structured, and anticipative), program design (clear, interpreted flow of work program)

9) Reusable (some or all teaching media program can used again to developing other teaching media)

b. Learning design aspects:

1) Clarity of learning objective

2) Relevancy between learning objective with standard competency/basic competence/curriculum

3) Deepness of learning objective

4) Accuracy in using learning strategy

5) Interactive

6) Give motivation to learn

7) Contextual an actual

8) Completeness and quality of supplementary material

9) Appropriateness between teaching materials with learning objective

10) Deepness of teaching material

11) Easy to understand

12) Systematic, and well organized

13) Clarity of explanation, example, and exercise

14) Consistency between evaluations with learning objective

15) Accuracy of evaluation tool

16) Giving feedback toward evaluation result

c. Communication visual aspects:

1) Communicative

2) Creative

3) Simple and interesting

4) Audio (narration, sound effect, back sound, music)

5) Motion media (animation, movie)

6) Visual (layout design, typography, color)

7) Layout interactive (navigation icon)

B. Multimedia

By development of technology all kinds of teaching media can be used in the same time through one tool that called as multimedia. Multimedia is combination from some media, so can make teaching learning more interactive, effective, efficient, and interesting.

1. Definition of Multimedia

There are some definitions of multimedia that stated by some expert. According to Syarif in Alifah (2013:5) multimedia also can call by many media, the component of this media consist of text, picture, video, and audio. In other word, making communication by using multimedia means that making communication using more than one media.

Based on Hackbarth (1996:229) Multimedia is suggested as meaning the use of multiple media formats for the presentation of information, including texts, still or animated graphics, movie segments, video, and audio information. Computer-based interactive multimedia includes hypermedia and hypertext. Hypermedia is a computer-based system that allows interactive linking of multimedia format information including text, still or animated graphic, movie segments, video, and audio. Hypertext is a non-linier organized and accessed screens of text and static diagrams, pictures, and tables.

In addition Mahajan (2012:6) stated that multimedia uses multiple forms of text, audio, graphics, animation, or video to convey information.

As such, multimedia technologies offer today's classroom teachers the opportunity to move from a largely linear learning environment to an increasingly nonlinear environment. Such technologies also allow students a strong degree of choice as they pursue learning with multimedia texts. The multimedia classroom tools offer classroom teachers multiple ways of engaging students in the learning process. Teaching is no longer "chalk and talk", it is supported with various media like books, journals, audio-visual aids, electronic media i.e. radio, TV, computers etc.

While Mayer (2001:34) also stated about multimedia in teaching/learning process, that is multimedia learning refers to the cognitive effect or mental images that man forms as consequences of being exposed to a multimedia show. Multimedia learning occurs when people build mental representations from words (such as spoken text or printed text) and pictures (such as illustrations, photos, animation, or video).As you can see in this definition, multimedia refers to the presentation of words and pictures, whereas learning refers to the learner's construction of knowledge. The process by which people build mental representations from words and pictures is the focus of Mayer's cognitive theory of multimedia learning. He adds that multimedia offers instructors and students new ways to enhance the teaching/learning process. Multimedia is important in education because it holds great promise for improving the quality of education. That is, it provides

teachers and students with the tools to access multiple images and sounds. Teachers can "break free" from the constraints of textbooks and the chalkboard. Classes can experience specific learning material, know about its background in real-time or slow motion.

Thus, we can conclude that multimedia-based teaching is teaching learning process that the teacher use many media to deliver material to attain certain leaning objective. The media can be inform of text media or electronic media. This media conveyed interactively, so, can make students' learning experience like in the real-time.

2. Advantages of Multimedia

Based on the definitions of multimedia above, we know that the multimedia has advantages in education field, especially in teaching learning process. This media can be used in the class or individually. Students also can interact with this media actively and individually, for example the using of multimedia inform of a program. Then the advantages of multimedia in educational field that stated by some expert as in the following explanation.

According to Kustiono in Ikhtiari (2010:10-11) multimedia interactive learning has some benefits in increasing the effectiveness of learning process, those are:

a. May direct interaction between user and learning material.

b. Learning process can happen individually based on students' ability.

c. Increasing student interest and motivation.

d. Give feedback toward students' respond.

e. Create continued learning process.

Multimedia close related with ICT. ICT not only use as human problem solving but also in education field, especially increasing the quality of teaching learning. ICT also can support and give advantages in teaching learning process like stated by Krisnadi (2009:6). The advantages are:

a. Increasing learning quality.

b. To make wide the access toward education and learning.

c. Decrease of education cost.

d. Answer requirement of ICT participation.

e. developing ICT skill that students need to work in the future life.

While based on Mahajan (2012:10-11) the benefits of multimedia for teacher are:

a. *High Fidelity*

Alessi and Trollip (2000) define fidelity as how closely a simulation imitates reality. In teaching student teachers about classroom management skills, the best medium cannot be words, but a power-point presentation, demonstration using LCDs or video footage depicting a well managed classroom.

b. *Skill learning*

Teaching students the practice of teaching skills by demonstration, the most efficient and effective means of delivering these skills is by

using various available multimedia approaches like computers, LCDs, Video footages etc.. A basic characteristic of such presentation is that it can be shown several times. This gives the teacher the benefit of using it for emphasis and the learner for mastery.

c. *Development of Creativity*

"Creativity is the act of bringing something into existence that is genuinely new, original, and of value" (NCREL & the Metiri Group, 2003, p. 33). The amount of acquired knowledge no longer defines intelligence; rather, today's measure of intelligence involves the capacity to create, produce, and apply technology in complex and sustained situations (Committee on Workforce Needs in Information Technology, 2001). This skill is essential to teaching today's children effectively. They are a generation of learners who have continuing technology-enhanced opportunities to create and share new, original, and valuable information with others.

Tudor, defines creativity as a process by which a person combines flexibility, originality and sensitivity to ideas, to enable him break away from the usual ways of thinking and doing things to a new and productive way. As teacher professionalism involves a continuous search for new and better ways of teaching and handling school affairs, this means that teachers need to be creative.

However psychologists have agreed that creativity is an innate potential which if not developed, will remain latent in the individual.

Creativity can only be developed through the use of a teaching process that promotes its development. Such a process includes stimulating thinking, making teaching concrete and full of interaction and discussion.

Unfortunately, our current teaching approach in teacher education serves to compel students to be passive as they receive notes and solve problems the way their tutors expect them to. The potential of the video presentation to generate discussion and learning is enormous. It can serve as an effective advance organizer, present vital psycho-motor and cognitive skills and enhance meaning of content in lesson delivery, as well as serve as an effective closure tool. These benefits suggest what we are losing by not using this tool in our attempt to make our teachers more able to be creative in their teaching.

d. *Development of Multimedia Literacy*

According to Gutierrez, the primary objective of educational systems include the development of the individuals ability for self expression and communication in various forms through writing, music, art and the like. However, success in achieving in formal education evidently relies on comprehension or understanding of the messages made available in instruction.

Literacy as a concept has overgrown the exclusive use of alphabetic language to its implications for both the individual and the society. It is only by this that literacy can influence the transformation of the

social. A literacy process that is based on the mechanical procedures of encoding and decoding texts in the classroom can no longer serve the purpose of our society. Thus, one other critical merit of teaching with multimedia is that it trains the student teachers on media literacy.

According to Guitierrez, media literacy is that which prepares people to utilize appropriate procedures when critically viewing different kinds of media (different in function or system of symbolic representation) so that they can assess what happens in the world and improve it to the extent that they can. Procedure in teaching is as important as content. To the extent that multimedia provides a superior procedure than verbal information and text, its use as a teaching tool will surely revolutionize the teaching landscape in.

e. *Provision of Teachers with Cognitive Tools for Thinking*

The human brain is no longer a 'black box' as studies in brain psychology have provided substantial knowledge about what happens in the brain as we learn. The effect of information processing on memory and performance has been highlighted and the factors that support the appropriate encoding, storage and retrieval of information have been exposed, centering highly on the power of cognitive tools in enhancing thinking. Cognitive tools are generalizable computer tools that are intended to engage and facilitate cognitive processing (Kommers, et. al.). They are mental devises that support, guide and extend the thinking process of their users. Their main function is to

activate appropriate mental models in the brain thereby enhancing the interpretation of new information and assimilating new information back into those models (Jonnassen).

The power of a multimedia to bring reality into the learning environment makes it one of the most useful tools of cognitive processing and memory. This can be testified by the fact that students who watch an interesting movie can remember almost 80% of it after one hour but can remember only about 25% of lecture information after the same time lapse. Indeed, the teacher in the 21st century cannot afford to miss out on this benefit of using the multimedia to enhance lesson delivery.

In addition Du (2011:913) mentions some multimedia advantages in teaching English:

a. *The application of multimedia can stimulate students' interest and improve their language sense.*

   With this interactive, virtual atmosphere, students can get knowledge in a pleasant environment and apply it easily, which can help their full development.

b. *The Application of Multimedia can Help Cultivate the Intercultural Communication Learning a language is tightly connected with its culture.*

   To learn English well needs the integration of English and the culture of English-speaking countries. With multimedia, students

can have more chances to be exposed to English culture directly or indirectly, which cannot be achieved from traditional classes.

c. *The Application of Multimedia can Strengthen Students' Comprehension and Understanding.*

All senses are involved in the learning process. Sight and hearing accounts for 94% of the comprehension of learning materials, among which sight makes up 83%, and hearing 11%. When hearing and sight combine, the effect is strikingly improved. The application of multimedia motivates the senses, especially sight and hearing, which effectively strengthen students' comprehension and understanding.

d. *The Application of Multimedia can Improve Teaching Quality motivation and attitude are the two key factors of English learning.*

Active learning motivation and attitude can help learners acquire the target language proficiency. The more active leaning becomes, and the better learning effect, vice versa. The application of multimedia arouses the motivation of learners, and can promote their learning from the internal cause.

e. *Improves Learning.*

Multimedia learning takes less time, it enjoys more and increases learning. Najjar (1996: 30) found that "learning was higher when information was presented via computer-based multimedia systems than traditional classroom lectures".

C. Adobe Flash CS3

In developing English multimedia-based teaching media the researcher need software to create it. There are some software provided to make multimedia for teaching media. One of them is Adobe Flash CS3 that provided by Adobe, Inc. In the beginning the function of this software is to create animation or internet-based application. But now days as long as increasing of technology in education, this media also can be used to developing teaching media. By using this software teachers can innovate to make interesting and interactive teaching media. So, they can motivate their students' attention in their teaching learning process.

Andi in Bakri (2011:5-6) stated that Adobe Flash CS3 is a software from adobe, Inc. which used by almost people because of its ability in doing many things that related to making cartoon movie, advertisement banner, web site, presentation, game, and so on. Furthermore, flash also can be combined with other program, for example, AutoCAD, Photoshop, Camtasia, and so on. In addition, flash also can be combined with code programming, such as, ASP, PHP, and so on.

According to Nugroho (2008:5) the most special thing between adobe flash CS3 than the other application is in the size of the file of the animation. The size of file is small so this software use by many people to create a web to make the layout more interactive.

The following is basic component of Adobe Flash CS3 According to Nasution (2013:2-4):

1. Working area of Adobe Flash CS3

   This part is to create the animation, there some component in this working area.
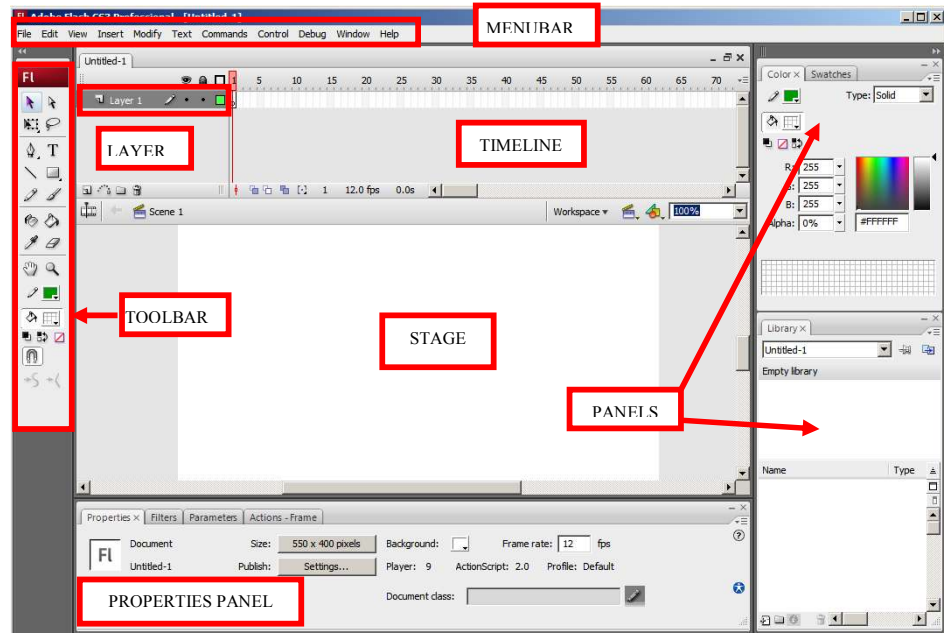
Picture 2.1. Working Area of Adobe Flash CS3
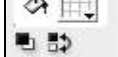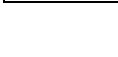
Table 2.1. Name of Component in Working Area of Adobe Flash CS3 and Its Function

No	Name	Function
1.	Menubar	Consist of command in the Adobe Flash CS3 Professional
2.	Toolbar	Toolbar is panel that consist kind of tool. The tools grouped into 4 groups: (1) Selection tool, the button to select objet, (2) Draw tools, the buttons to make and edit picture or text, (3) Colors, consist of buttons used to adjust object color, and (4) Views, involve buttons used to adjust object or picture layout.
3.	Layer	Layer used to put one or some objects into stage.
4.	Timeline	Timeline is component used to adjust and control animation run for some layer.
5.	Panels	This panel consists of tool.
6.	Stage	Stage use to play object that will give animation. In the stage we can make picture, text, giving color…etc.
7.	Panel Property	This panel consists of some panels. There is library panel that used to adjust object in document, color, and so on.

2. Tool in Adobe Flash CS3

    To make an object, editing the object, and coloring the object, we use tool box. The tool box in Adobe Flash CS3 and its function like follows:

Table. 2.2. Tool Box of Adobe Flash CS3 and Its Function

		Function
Fl [toolbar image]	▸	Selection tool. Used to select and move object.
	▸	Sub selection tool. Used to change the shape by editing the dot.
	▦	Free transformation tool. Used to change the size or rotate object.
	◯	Lasso tool. Used to select part of object that want to edit.
	✎	Pen tool. Used to create free object with dot as a connection.
	T	Text. Used to create text, word, or sentence.
	＼	Line tool. Use to create line.
	▭	Rectangle tool. Used to create rectangle object or polygon.
	✎	Pencil tool. Used to create free object.
	✦	Brush tool. Used to create free object with the provided size and thickness.
	✎	Ink bottle tool. Used to give color for outline from an object.
	◇	Paint bucket tool. Used to give color to object freely.
	✎	Eyedropper tool. Use to take sample of color.
	⌓	Eraser tool. Used to erase object.
	✋	Hand tool. Used to adjust stage.
	⚲	Zoom tool. Used to zoom in and zoom out the layout of object in the stage.
	◯	Oval tool. Use to create circle or oval object.
	✎■	Stroke color. Used to give color to outline.
	◇▦	Fill color. Used to give color to object.
	■⇨	Black and white. Used to change the color of outline or fill with black or white color.
	⋒	Option tool. Used to adjust addition function on the active tool.

D. Previous Study

Many researches have report to expose developing multimedia-based teaching media; some of the researches are noted as below:

Ghea Putri Fatma Dewi (2012) developed English education game by using Macromedia Flash in topic of animal for IV grade of Elementary School. There are some stages in develop this game, those are: analysing, designing, developing, implementing, and evaluating. In this study the result are: the average result from expert of media validation was 4.32, from expert of material validation was 4.59, and from students' evaluation got was 3.07 it means that this media was proper in to use in English teaching learning.

Kusuma, et al (2014) in their research, they develop English multimedia interactive for XI grade of Senior High school. This development of teaching media interactive developed based on flowchart and storyboard. The result of evaluation from teaching material expert was 100% in good qualification. Then, the result of evaluation from expert of design was 88% of good qualification level. Meanwhile, the result of evaluation from expert of media was 81.8% of good qualification level. The result from one-to one evaluation was 90.6% of good qualification level. Next, the result from small group evaluation was 91.3% of good qualification level. And the last was the result from field trial evaluation was 90.2% of good qualification. Based on manual calculation on the students' learning outcomes, the result of t-test showed 11.02 points. On the other hand, the t-table value on 5% of significance level was 2.021. Thus, the value of t-test was bigger than the t-table value, and

therefore H0 was not accepted, while H1 was accepted. As the result, there was a significant difference on the students' learning outcomes on English subject before and after using the interactive learning media. The students' average score after using the media was 81.67 or higher than before the media was used, which was only 61.88.

From the previous findings above, the writer developed English multimedia-based teaching media using Adobe Flash CS3. The differences between this research with the previous study were: (1) using Adobe Flash CS3 software, (2) for VII grade, and (3) in topics of second semester. So, this research is difference from previous finding above.