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Developing an Interactive Multimedia of Reading for Junior High School Students Grade VII

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Abstract⸺ **The aim of this research is to develop an interactive learning multimedia of reading for grade VII students of SMP N 1 Piyungan, Yogyakarta. This research is a research and development (R&D) study. The development of the interactive learning multimedia of reading was carried out through several steps, namely needs analysis, course grid design, product development, product validation, product revision, try-out, and final product development. There were some respondents involved in the study, i.e. one content expert and one media expert, 75 students or needs analysis, and 48 students for try-out. The data were collected through classroom observation, interview, and questionnaire. The instruments of data collection were observation guides, interview guides, expert validation sheets, and questionnaires for the students. The data were analyzed descriptively. The needs analysis data show that the students have various needs in learning reading through the interactive learning multimedia. For the learning needs, the students chose various reading topics, such as hobbies (73.81%), stories (54.76%), things around us (42.86%), life in school (27.38%), and teenage life (26.19%). Some of them (40.48%) preferred reading text with 100-200 words of length. Meanwhile, for the target needs, the students preferred learning reading to improve their vocabulary (71.43%), find the main idea (58.33%), find the moral (47.62%), find the general information (48.81%), and find the meaning of words in the reading text. Some of them preferred the pictured-cued item (46.43%), the multiple-choice (44.05%), matching (40.47%), the comprehension questions (40.47%), the short-answer (40.48%), and the ordering tasks (29.76%) for the reading learning activities. Besides, the appropriate interactive learning multimedia of reading for grade VII students in junior high schools consisted of four reading units, namely *Things around Us* (descriptive text), *Professions* (descriptive text), *Foods and Drinks* (procedure text), and *Hobbies* (procedure text). Every unit made up of the five components: *Playing with Words, Let's Read , Did You Know*, *Upgrade Your Reading*, and *Mini Dictionary*. The experts' validation data show that the developed interactive learning multimedia of reading was "good" based on a total mean of 4.17 on a 5-1 *Likert* scale. The content aspect data analysis results show a mean of 4 and the media aspect shows a mean of 4.35. In addition, the results of the try-out indicate that the content aspect is in the "good" category with the mean of 4.01, the presentation aspect is in the "good" category with the mean of 3.83, and the media aspect is in the "good" category with the mean of 4.01.**

Keywords— **Developing; interactive multimedia; reading**

I.   INTRODUCTION

Most of schools nowadays improve their learning quality by providing students with a lot of computers. The schools are equipped with computer laboratories and even each class consists of a computer and an LCD (*Liquid Crystals Displays)*. The integration of computer into the English language teaching and learning process of course can be a great educational innovation. However, some schools may still get difficulties to maximize the use of computer technology as the learning media. For example, based on the observation that was conducted in three classes in grade VII students in SMP N 1 Piyungan Yogyakarta, the integration of computer for English learning had not optimum

yet because the limited number of the learning multimedia.   The available learning multimedia cannot support the students to learn independently and interactively. Meanwhile, one of the characteristics of the appropriate learning multimedia according to Reiser and Dempsey (2007), it must be learners centered where the learners and their performance are the local points of all teaching and learning activities.

Apart from the preceding problems, the learning process especially for reading subject also needs to be upgraded. The students are expected to have a good reading skill in order to make them have a better understanding about the inter-relationship among language and culture and have a better perspective of other cultures.

However, the students did not have ample opportunities to learn reading. They usually listen to the teacher's explanation and work on the particular exercises. As the effect, the students did not pay attention to the reading.

Based on those facts, one of the solutions to maximize the use of the computer as the learning media and to give the students more opportunity to learn reading is by creating an interactive learning multimedia of reading. The selection of the interactive learning multimedia which is based on the needs of the students, the objectives to be achieved in learning, the students' characteristics, and the students' environmental condition will help them to optimize their potential in learning reading. Moreover, the learning process is more interesting and enjoyable, and the students will have more opportunities to learn reading interactively and independently.

II. THEORITICAL BACK GROUND

A. TEACHING READING

1) DEFINITION of READING : Reading is one of the important skills that have to be mastered by the learners in learning language. Reading is the gateway of knowledge which is important to develop the mind. Some experts agree that reading is a process of getting information from printed verbal symbol.

According to Pang, et al. (2003), reading is complex activities involved both perception and though related to word recognition and comprehension process. The definitions give point of view that reading is a thoughtful process. It is an active process to search for the meaning from the text. The cognitive-constructivist states that reading is *"a process in which the reader actively searches for meaning in what s/he read"* (in Graves, Juel, & Graves, 1998: 2). The process to search for the meaning in the text depends on the reader's existing prior knowledge, or schemata, that s/he draws on in the searching meaning. Hence, reading is involving the reader in ongoing interaction with the text and there is an essential interactive process between language and though in reading process.

The interaction process between the reader and the text involves the reader in activating knowledge of the world, past experience, expectation and institutions, to arrive at meaning of text. In reading process, when the reader focuses on what is already known in trying to comprehend a text, it is called "Top-down" processing. On the other hand, when the reader relies primarily on textual information to comprehend the reading, it is called "Bottom-up" processing. The interactive reading happens in the combination between the two models.

2) DEVELOPMENT STAGES of LEARNING READING : There are several development stages in learning reading. These stages are important in order to arrange the appropriate reading materials and activities in the classroom. According to Rivers (1981), the following development stages of reading learning process are:

1. Introduction to reading
   In the first stage, the teachers should create the students' interest and motivation by linking the topic of the text to their own experience or existing knowledge. The teachers may give some pre-reading/ focusing question to help them. Before going to read, the students should be familiar with reading itself.
2. Familiarization
   In this stage, students read the reading materials or text that they have been using orally, but with recommendation and variation. The students may read recommendation narratives and conversations developed from the dialogues or short anecdotes and episodes using the type of material the students have been actively producing in oral activities in the classroom.
3. Acquiring reading techniques
   In this stage, the teachers may give the students some points to search for the reading text, or ask the students to suggest the points. The students are being trained by the teacher to do reading activities without the teacher's help.
4. Practice
   In the fourth stage, the student's reading activities may be classified as intensive and extensive. Intensive reading is related to the further progress in the language learning under the teacher's guidance. While extensive reading develops at the student's own pace according to the individual ability.
5. Expansion

In this stage, it is expected that the independent learning will establish even though the students are not common with that. In the intensive reading, the students will not only be read but will be discussed in detail in the target language, sometimes analyzed, and used as a basis for writing exercises. While in the extensive reading, the reading activities can be made the basis for oral reports to the rest of class, or full class discussion.

6. Autonomy

In the last stage, the students have to be confident enough to pick up a book, magazine, or newspaper and read it for their amusement and enlightenment, with only occasional resort to a dictionary.

The development stages of learning reading help the teachers to deliver their students become a successful reader. By identifying the development stages of learning reading, the teachers can put the skill into a classroom context and see some of its possible relationship with the other language skills. Moreover, the teacher can develop the reading materials/ texts based on the students' ability or level.

3) READING TEXT : Text is an essential part in reading. Text cannot be separated from the reading learning activities because reading is a process for searching meaning from the text. For many teachers, text is the representation part of the lesson. Texts are used as the main material reference in the reading class.

According to Al-Issa (2006), the ability to understand the reading text is not only related to the readers' linguistics knowledge but also the general knowledge of world and the extent to which the knowledge is activated during the reading process. Therefore, in the learning reading process, the students need to be given opportunities to read various text reading because it can serve as a tool to help the students think critically about issues they are faced.

According to Nuttal (in Brown 2001), the text should have the suitability, exploitability, and readability. The suitability means that the text reading should be interesting, enjoyable, challenging, and appropriate with the student's needs. Meanwhile, the exploitability means that the text should facilitate the achievement of

certain language and content goals, exploitable for instructional tasks and techniques, and integratable with other skills (listening, speaking, and writing). Finally, the text also has to readability. The texts with lexical and structural difficulties have to challenges the students without overwhelming them. In selecting appropriate reading materials/ texts, the texts criteria must be used as the consideration.

4) READING MICRO-SKILLS : Reading can develop listening and speaking skills independently. Reading also help students to build up their vocabulary that is used to help their listening comprehension. Therefore, the reading micro-skills become important to know in order to support other skills improvement.

According to Munby (in Alderson, 2000), the reading micro-skills are as follows:
1. recognizing the script of a language,
2. deducing the meaning and the use of unfamiliar lexical items,
3. understanding explicitly stated information,
4. understanding conceptual meaning,
5. understanding the communicative values of sentences,
6. understanding relation within the sentence,
7. understanding relation between parts of text through lexical cohesive device,
8. interpreting text by going outside it, recognizing indicators in discourse,
9. identifying the main point or important information in discourse,
10. distinguish the main idea from supporting detail, extracting salient details to summarize (the text, an idea),
11. extracting relevant point from a text selectively,
12. using basic references skills,
13. skimming, scanning to locate specifically required information, and
14. transcoding information to diagrammatic display.

In teaching learning process, the reading micro-skills are used to develop syllabus and materials design. It also can be used as the guidelines in developing the reading materials and   tasks.

3

5) READING TASKS : A task can be defined as an activity that is used by the learner in order to achieve an outcome for communicative purpose. According to Nunan (2004: 4), *task is a piece of classroom work that involves learners in comprehending, manipulating, producing or interacting in the target language.*

There are many kinds of reading tasks to facilitate the students in learning reading. Brown (2004) divides types of reading tasks as follows.

1. Perceptive reading tasks
   It involves attending to the components of larger stretches of discourse: letters, words, punctuation, and other grapheme symbols. Bottom-up processing is implied in this type of reading task.
2. Selective reading tasks
   It kinds of an artifact of assessment formats. In order to ascertain one's reading recognition of lexical, grammatical, or discourse features of language within a very short stretch of language, certain typical tasks are used: picture-cued tasks, matching, true-false, multiple choice, etc.
3. Interactive reading tasks
   Included among interactive reading types are stretches of language of several paragraph to one page or more in which the reader must, in a psycholinguistic sense, interact with the text. Typical genres that lend themselves to interactive reading are anecdotes, short narratives and descriptions, questionnaires, memos, announcement, directions, recipes and the like.
4. Extensive reading tasks
   It applies to texts of more than a page, up to, and including the professional articles, the essays, the technical report, the short stories and the books.

The reading tasks can be adopted or adapted from many sources. The various reading tasks will make the reading activities in the classroom become more challenging and interesting. The appropriate reading tasks also help the students to improve and achieve their goal in learning reading.

6) TEACHING READING PRINCIPLES : Nation (2009) divides the teaching reading principles as follows:

1) Meaning-focused Input
   Practice and training in reading should be done for a range of reading purposes. The learner should be doing reading that is appropriate to their language proficiency level.
2) Meaning-focused output
   Reading should be related to other language skills. The course should involve the listening, speaking and writing activities related to the reading.
3) Language-focused Learning
   Learners should be helped to develop the skills and knowledge needed for the effective reading. Therefore, the student should be given a training and practice in a range of the reading strategies.
4) Fluency Development
   The learner should be helped and pushed to develop fluency in reading. The learner should enjoy reading and feel motivated to read.

From the teaching reading principles, it can be summarized that reading is built up into the process. The process may take much time because reading is not an instant process. Therefore, the teachers should be able to arrange the effective, interesting, and understandable reading activities/ strategies for their students.

B. TEACHING ENGLISH in JUNIOR HIGH SCHOOL
1) THE CHARACTERISTICS of SMP STUDENTS :
The junior high school students can be categorized into adolescent. According to Stone (2009), there are two main characteristics of adolescent in learning. First, they have already possessed knowledge and skill. Second, they want to participate in literacy practice that is suited to their own lives. Based on those characteristics, it can be assumed that the junior high school students have ability to learn by themselves. They can think critically and logically, and they know what they are needed for their future. However, the students still need the teachers' help in learning process to guide them to find out the better way in achieving their learning goals. Therefore, the English teachers may assist students in exploring how to read and how to participate them in the different situation

in their life. In addition, the English teacher may allow the students in how to approach a text with before, during and after reading strategies. The appropriate strategy will help and support the students better in the reading mastery.

2) COMPETENCY STANDARD and BASIC COMPETENCY: The main purpose of teaching English in the junior high school is to develop the ability to communicate orally and in writing using English, to increase awareness about the real importance of English as the main tool for learning, and to develop the better understanding about the inter-relationship among language and cultures (Depdiknas, 2007).

To develop the competencies in reading, the reading subjects are divided into several themes. The English reading themes for grade VII students in junior high school based on the curriculum and the syllabus are *Self-Identity, School Life, Family Life, Profession, Hobbies, Things around Us, and Shopping.* Those reading competences and themes then become the consideration in developing the reading materials and learning activities in the interactive learning multimedia of reading.

C. INTERACTIVE LEARNING MULTIMEDIA

1) DEFINITIONS of THE INTERACTIVE LEARNING MULTIMEDIA : According to Ivers and Barron (2002), multimedia defines as the use of several media to present information. Multimedia consists of several media, such as text, graphics, animation, pictures, video, and sounds. Vaughan (2008) states that multimedia is a combination of digitally manipulated text, photographs, graphic art, sound, animation and video elements. In the other words, multimedia involves multiple media formats (e.g., text, pictures, sounds, and video) to convey information. Multimedia which gives the users some navigational control is called interactive learning multimedia. It allows two-way interaction with multimedia course with direct response to the input as opposed to one-way communication.

Based on the definitions, it can be summarized that interactive learning multimedia is a learning tool which integrates media objects such as text, graphics, video, animation, and sound to represent and convey information. It allows the users to learn interactively in which

the materials can be responded directly or it allows the users to interact in two ways.

2) CRITERIA of APPROPRIATE INTERACTIVE LEARNING MULTIMEDIA : The development of interactive learning multimedia must be referring to the good criteria of multimedia development. The appropriate learning multimedia will engage the students to make choice about moving within the material in meaningful ways. Chee and Wong (2003) state that the good criteria of instructional multimedia are as follow:

1. It allows learners to use the tools easily so that they can concentrate on content rather than on knowing how to use these tools.
2. It provides online help to the learners which can explain various menus, buttons, keys, etc.
3. It allows learners to easily create or produce materials.
4. It provides clear, effective, and consistent layout of tools, icons, and menus.
5. It provides flexibilities, so that the learners can easily modify and edit the previous work.
6. It provides flexible graphics capabilities for importing and exporting graphical images.
7. It allows for easy manipulation data (e.g., text, numbers, and graphics).

The development of the interactive learning multimedia of reading in this research refers to these categories. The multimedia provides the students with the meaningful and challenging reading materials and activities. As the result, it is hoped that the reading activities is more appropriate, interesting, and valuable for the students.

3) THE INTERACTIVE LEARNING MULTIMEDIA COMPONENTS : Multimedia is a combination of several media. According to Vaughan (2008), the multimedia consists of the following components:

1. Text

   Text is important to cultivate accuracy and conciseness in the specific words that is chosen. In multimedia, texts become the words that will appear in titles, menus, and navigations aids as well as in the narrative or content.

2. Sound

   Sound can be the most sensuous element of multimedia. It is meaningful "speech" in any language, from whisper to a scream. It can

provide the listening pleasure of music, the startling accent of special effects, or the ambience of a mood-setting background.

3. Image

   Some parts of images in multimedia can be seen as composite of elements text, symbols, photograph-like bitmaps, three-dimensional renderings, distinctive button to click and etc. It can use to draw learner's attention to important information and make it more exiting. Moreover, it is useful to attract and interest the multimedia users.

4. Animation

   Animation is the act of making something come alive. A simple form of animation consists of visual effects such as wipes, fades, zooms, and dissolves. With animation, a series of images are changed very slightly and very rapidly, one after the other, seemingly blending together into a visual illusion of movement.

5. Video

   Video places the highest performance demand on any computer system. Digital has replaced analog as the method of choice for making video for multimedia. Digital video gear produces excellent finished product at a fraction of the cost of analog and eliminates the image-degrading analog-to-digital conversion. It also can be used to highlight a concept that difficult to comprehend by normal means.

   The interactive learning multimedia of reading in this study consists of some elements as stated in the previous explanation. Each slide in the learning multimedia was combined with several multimedia components.

   4) MULTIMEDIA DEVELOPMENT MODELS and PROCEDURES : In the related literature, there are several models of multimedia development. the development models of multimedia generally consists of four phases, such as designing, developing, evaluating, and implementing the product. In this study, the development steps are adapted and suited with the learning situations in the selected school. The procedure of developing the interactive multimedia can be see as below:

TABLE 1
(Multimedia Development Procedure)
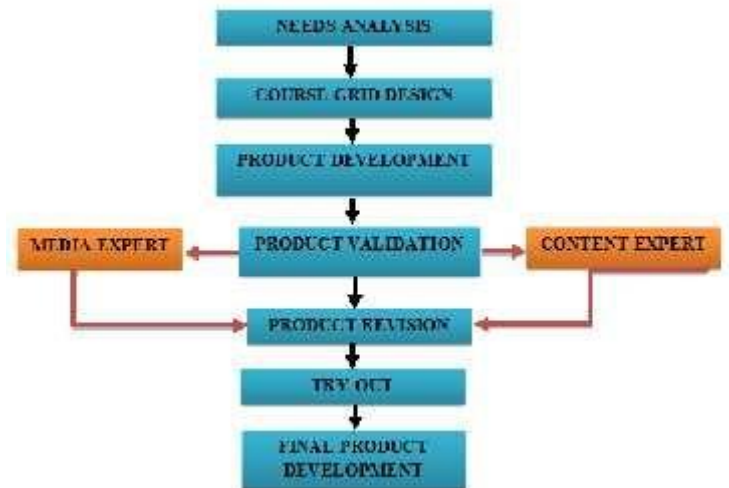
There are seven steps was done to develop an interactive learning multimedia of reading for grade VII students in junior high schools, namely:

1. Needs analysis. It was used to collect information about the target needs and the learning needs of the students. The target needs related to what the learner needs in the target situation while the learning needs related to what the learner needs to do in the target situation.

2. Course grid design. The course grid was used as the guideline for learning performance and it displayed the reading materials/ texts that will be learned by the students.

3. Product development. It involved the development of the instructional materials and the learning tasks.

4. Multimedia validation. It involved content and instructional validation and media validation. It was used to know whether the multimedia was eligible to be tried out.

5. Product Revision. In this step, the assessments from the experts were used as the input to revise the multimedia draft.

6. *T*ry-out. It was tried to find out whether the product was applicable for the mentioned purpose, as well as, to know the users' feedback and quality of development instructional multimedia program.

7. Final product development. The data from try-out was analyzed and revised as the final product.

III. RESEARCH METHOD

A. THE NATURE of THE STUDY

This research is a research and development (R&D) study. The purpose is to design a new product and procedures. Gall, Gall, and Borg (2003) defines educational Research and Development (R&D) study as the industry-based development model which the findings of the research are used to design new products and procedures. The general process in the R&D study is systematically field tested, evaluated, and refined until meet specified criteria of the effectiveness, quality or similar standard.

B. DEVELOPMENT MODEL and PROCEDURE

The development model of this research was adapted and modified the ones proposed by Dick, Carrey, and Carrey (2001) and Lee and Owen (2004). Therefore, the development procedures of this research and development were as follows:

1) **Needs Analysis**

Needs analysis generally defines as the students' needs in learning. It discovers what needs to be learned and what the learners need to learn. In this research, the need analysis data were collected from observation, interview, and questionnaire.

2) **Course Grid Design**

The course grid design was adapted from the English syllabus for grade VII student in SMP N 1 Piyungan Yogyakarta. The steps to design the course grid involves designing the reading topics or material, formulating the learning indicator, designing the learning reading activity, finding the material sources, and arranging the time allocation.

3) **Product Development**

In this part, there were several steps, namely:

a. Collecting the Learning Material. The learning material involves materials/texts, images, audio, videos, and music. The collected learning materials were arranged and developed into appropriate learning multimedia.

b. Creating the Multimedia Flowchart. The flowchart is used to give a brief description about the linkage among the page slides in the multimedia learning.

c. Creating the Multimedia Prototype. The prototype is the multimedia design or multimedia learning plot which presents the things in each slide of the multimedia. It consists of mini-lesson and follows the same pattern.

d. Creating Multimedia Learning Program. The learning multimedia product was developed by using Macromedia Flash Professional 8.0 program with the help of a number of computer programs.

e. Burning the Multimedia Program. In this step, the learning multimedia was burned into CD. The burning process was done to make the expert easy to evaluate the multimedia program. In addition, it can be used by the respondents.

4. Product Validation

The next step was validating the product. The experts' judgments were used to know whether the product was eligible to be tried-out. The experts consist of:

a. The content expert to validate the contents, the presentation, and the language of the reading materials and activities.

b. The media expert to validate the multimedia product that was related to the the design, the navigation, and the multimedia components.

5. Product Revision

Product revision is a process to revise the multimedia product that was assessed by the experts. In this part, the assessments from the experts' judgments were analyzed and then it was used to revise the interactive learning multimedia product.

6. Try-Out

In this part, the multimedia product was implemented. It is important to know whether the developed product was accepted and appropriate to use as the learning media for reading. In order to get more information and feedback from the learner, the interview was conducted.

7. Final Product Development

Finally, the data from the try-out were compiled and used as the consideration to revise the reading interactive learning multimedia. The final products in this stage were the final draft of the interactive learning multimedia of reading.

C. TRY-OUT

1) TRY-OUT DESIGN : The try-out design was started from distributing the multimedia CDs to the students. Then, the students operated the learning multimedia of reading through computers by themselves or help from the developers. The students learned reading material independently and sometimes discussed with their partners. Meanwhile, the researcher observed the learning activities during the multimedia implementation. After the students had finished all the reading units in the interactive learning multimedia, the questionnaire was distributed in order to find out their responses and assessments related to the multimedia quality. To make the feedback more clear, the interviews were done. The assessment from the try-out was evaluated and used as the consideration in revising the final product.

2) DATA COLLECTION TECHNIQUES : In the early stage of this research, the needs analysis data were collected. The data give information about the learning needs and the target needs of the students in learning reading. The data were collected through observation, interview, and questionnaire. The collected data were used as the consideration in developing the multimedia and the learning material.

The next data were collected through experts' judgments. The data were collected through questionnaires. The assessments from the experts were used to know whether the interactive learning multimedia product was proper to use as the English reading media for the junior high school students in grade VII. The input data from the experts' judgment were important to revise the interactive learning multimedia product.

The last data were taken from try-out. The try-out data were collected during the implementation of the interactive learning

multimedia product. The data were gathered by observing the learning process, distributing the questionnaire, and interviewing the students. The collected data were used as the input for the final product development.

3) DATA COLLECTION INSTRUMENTS : There were three instruments that were used in collecting the data, namely:
  a. Observation guide

Observation was important to collect information in the classroom situation. The observations were done in the classroom and in the computer laboratory. The observation results were collected through field notes and photograph.

The observation guidelines consist of the several aspects, namely learning set, learning activities (learning mastery, learning strategy/ approach, media learning, students' involvement, assessment process and learning outcomes, closing), and the students' activities. Meanwhile, the second observation was conducted during the implementation of the multimedia product. The observation was focus on finding the students' responses and feedback in using the interactive learning multimedia.

  b. Interview guide

Interview was conducted in the try-out phase. It is used standardized open-ended interview in which the exact wording and sequence of the questions were determined in advance. Besides, all of the interviewees were asked the same basic questions in the same order. The purpose of the interview was to get immediate feedback from the students regarding the language learning activities and the interactive learning multimedia product.

  c. Questionnaire

In this research, the questionnaires were developed based on the previous theories. The type of questionnaire in this study is closed-ended question that

requires participants to choose from a limited number of responses predetermined by the researcher. The questionnaire providing statements and the rating scale to indicate the participants' responses.

The questionnaire was distributed in three times. The first questionnaire was distributed to the students in order to gather information of the students' needs. The second questionnaire was distributed to the content and media expert to assess the quality of the multimedia. The questionnaires consist of statements (1) for the content and instructional expert involved content, presentation, and language aspect; (2) for the media expert involved computer software, video, visual, slide, audio, and texts aspect. The third questionnaire was distributed during the implementation to gather information about the learner's response to the interactive learning multimedia product.

IV. RESEARCH FINDINGS

A. DESCRIPTION of NEEDS
1) THE TARGET NEEDS : The target needs data related to what the learner needs to do in the target situation. Observation and questionnaire were used to find out the students' needs. Mean and percentage for each aspect of the needs were first calculated. The needs analysis process was started from the classroom observation. It used unstructured or informal observation where the purpose was to find out the information about learning situation as much as possible. The data were taken during the learning process and they were collected through field notes.

Based on the observation data, it can be concluded that the students need to give more opportunities to learn reading. The students have to know what their goals in learning reading. To know what the learner needs to do in learning reading, the data were collected through the questionnaire. It consisted of five aspects, namely: reading input, reading micro-skills, reading learning activities, computer literacy, and multimedia components.

2) THE LEARNING NEEDS : The learning needs related to what the students need to do in order to learn. The data consist of the reading topics, length of the text, text authenticity, and others aspects. The data indicate that the learners basically have interest in English reading. When students have an interest in reading, it was assumed that the interactive learning multimedia of reading can be implemented.

B. DESCRIPTION of THE APPROPRIATE INTERACTIVE LEARNING MULTIMEDIA
In developing the multimedia, there were several steps were done as follow.
1) THE COURSE GRID DESIGN : The multimedia consisted of four reading unit, and each unit consisted of four main activities. A brief description of the course grid design is presented as follows.

a. **Description of Unit I:** *Things Around Us*
This unit helps students to learn descriptive texts. The topic talked about things at school and home. This unit has four main activities. First is *Playing with Words* that consists of several vocabulary exercises that are used for pre-reading activities. In this part, students identify vocabulary related to the things at school and home. The patterns of the vocabulary exercise are matching, picture-cued, short answer, and multiple-choice tasks. Second is *Let's Read* that consists of reading texts and reading comprehension exercises. In this part, students read and answer questions related to the texts. Students also identify the rhetoric steps of the descriptive text. Third is *Did You Know*. It contains brief information about grammar related to the texts, i.e., preposition (*in, on, under, behind, between, near, etc*.), plural forms, and the use of *there is* and *there are*. The fourth part is *Upgrade Your Reading*. It is an evaluation for the entire reading activities in Unit I. It consists of answering questions related to the descriptive texts and the grammar features.

b. **Description of Unit II:** *Professions*
This unit also helps students to learn descriptive texts. The topic talked about kinds of jobs. This unit has four main activities. First is *Playing with Words* that consists of several vocabulary exercises that are used for

pre-reading activities. In this part, students identify vocabulary related to professions. The vocabulary is displayed through videos, others through matching and picture-cued tasks. Second is *Let's Read* that consists of reading texts and reading comprehension exercises. In this part, students read and answer questions related to the texts. Students also identify the rhetoric steps of the descriptive text. Third is *Did You Know*. It contains brief information about grammar related to the texts, i.e., Adjectives *(tall, thin, small, big, etc.),* Adverbs of frequency *(always, usually, sometimes, seldom, etc.),* Simple Present Tense, Possessive. Finally, *Upgrade Your Reading* is an evaluation for the entire reading activities in Unit II. It consists of answering questions related to the descriptive texts and the grammar features.

c. **Description of Unit III: *Foods and Drinks***

This unit helps students to learn procedure texts. The topic talked about the procedure in making foods and drinks. This unit has four main activities. First is *Playing with Words* that consists of several vocabulary exercises that are used for pre-reading activities. In this part, students identify vocabulary related to foods and drinks. The vocabulary is displayed through videos, others through matching, picture-cued, and multiple-choice tasks. Second is *Let's Read* that consists of reading texts and reading comprehension exercises. In this part, students read and answer questions related to the texts. Students were also provided with information about procedure text. Third is *Did You Know*. It contains brief information about grammar related to the texts, i.e., *countable and uncountable noun, quantifiers, some and any,* and *much and many.* Forth is *Upgrade Your Reading* that consists of an evaluation for the entire reading activities in Unit III, It consists of answering questions related to the descriptive texts and the grammar features.

d. **Description of Unit IV: *Hobbies.***

This unit also helps students to learn procedure texts. The topic talked about procedure in doing hobbies. This unit has four main activities. First is *Playing with Words* that consists of several vocabulary exercises

that are used for pre-reading activities. In this part, students identify vocabulary related to hobbies. The vocabulary is displayed matching, pictured-cued, and cloze tasks. Second is *Let's Read* that consists of reading texts and reading comprehension exercises. In this part, students read and answer questions related to the texts. Third is *Did You Know*. It contains brief information about grammar related to the texts, i.e., *noun, conjunction* and *adverbs*. Finally, *Upgrade Your Reading* is an evaluation for the entire reading activities in Unit IV. It consists of answering questions related to the descriptive texts and the grammar features.

2) MULTIMEDIA DEVELOPMENT (FIRST DRAFT):

a. **Multimedia Flowchart**

The flowchart describes how the interactive learning multimedia programme flows. It shows the program components and the sequence. It was a way to lay out the big picture of the multimedia programme and follow with the storyboarding to fill in the visual details.

b. **Multimedia Prototypes**

The prototypes describe the visual representation and the concrete idea of the interactive learning multimedia of reading. It consists of four units: *Things around Us* (descriptive text), *Professions* (descriptive text), *Foods and Drinks* (procedure text), and *Hobbies* (procedure text). Each unit in the interactive learning multimedia consisted of *Learning Focus, Playing with Words, Let's Read, Did You Know, Upgrade Your Reading* and *Mini Dictionary*. The multimedia display consisted of three parts, namely:

1. **Introduction**

It displays information about goals and guide in using the interactive learning multimedia of reading. Introduction gives simple and brief information about the use of the each component in the interactive learning multimedia.

2. **Content**

It displays the reading topics, the goals of reading, the reading activities, the reading texts, the reading tasks, and the reading

evaluation. It consists of five parts as follows:

a. *Learning Focus.*

It explains what was previously learned, what will be learned in each unit, and how to connect with one another and to subsequent learning. It includes the purpose of the lesson and its relevance to the course. It gives the brief description of what is the students going to do in each reading unit.

ii. *Playing with words*

It provides several vocabulary tasks. Besides to enrich the students' vocabulary, the purpose of these tasks is to prepare the students background knowledge. It can be used within exploration that brings out all possible ideas on a topic. Therefore, it helps students in pre-reading activities.

iii. *Let's Read*

It consists of the several reading texts and tasks. The purpose is to improve the students' reading comprehension. It displays the descriptive and procedure text.

iv. *Did You Know*

It provides the language structure or the grammar that was found in the reading texts. It is used in order to help students in understanding the sentence structure and give information about the grammar rules that related to the reading text. It consists of the important notes such as language function, genre of text (social structure/ generic structure), grammar rules, and etc.

v. *Mini Dictionary*

It displays words that were found in the reading texts. It is used to help the students in understanding the difficult words in the reading texts and material.

vi. *Upgrade Your Reading*

It provides reading evaluation of each unit. The purpose is to upgrade the students' comprehension in reading. It also used to engage the students in performing tasks such as match the words, answer the questions related to the texts, true and false questions, find the similar words, and etc.

3. **National Exam Challenge**

It is used to challenge the students with reading tests that was taken from selected national exam. The purpose is to give the brief description about the reading text that was tested in the national exam. It challenges the students in preparing and facing the national exam in the future.

3) DATA VALIDATION :

a. **Content and Instructional Expert**

The validation data from the content expert show that the average score for the content aspects was 4. It means that the interactive learning multimedia of reading was categorized into "good". The multimedia content was relevant with the standard competency, their basic competency, and the aim of the learning reading for grade VII students in junior high school. Moreover, the score for the content/ material sequences, the material completeness and depth, the tasks, the feedback, the social function of the text, and the text structure and elements was also 4 or it means "good". From this assessment, it was concluded that there were no problems related to the content of the interactive learning multimedia of reading. Therefore, there is no significant changes in the the content area. It was assumed that the multimedia content was suited and it has fulfilled the requirement to try-out.

b. **Media Expert Data**

The average scores for the computer software are 4.37. It means the computer software of the interactive learning multimedia of reading was "good". Meanwhile, the average score for video and the multimedia visual aspects were 4.33 or it means "good". Moreover, the data show that the mean for slide aspect was 4.67 and for the audio aspect, the data show that the mean was 5 or "very good". Finally, the average score for the text aspect was 3.6 or "good". It means that the text was readable enough.

c. **Validity Data**

The results of the validity of the instrument were good. The data show that the average

score was 4. With this result, the content of questionnaire was proper to apply in the try-out.

4) THE FINAL PRODUCT DEVELOPMENT : The data from try-out shows that overall students have positive responses to the use of the interactive learning multimedia of reading. Therefore, it was assumed that the multimedia was accepted as the learning media. From the result, it was analyzed that there is no significant changes to the contents of the multimedia product. However, the comments and suggestions from the respondents become the consideration to revise and to upgrade the interactive learning multimedia become more valuable.

V. CONCLUSION

This research and development (R&D) study developed appropriate interactive learning multimedia of reading for grade VII students in the junior high school. It was developed by using Macromedia Flash Professional 8.0 program with the help of a number of programs and it was copied in the CD as the application software. In developing an appropriate interactive learning multimedia, there were some steps were done. It was started from conducted the needs analysis, designed the appropriate learning material and put it on the course grid, developed the multimedia flowchart and prototype, validated the product, tried-out the multimedia product, and developed the final product.

In the needs analysis, it was found that the students have various needs in learning reading. The students chose various reading topics, such as hobbies (73.81%), stories (54.76%), things around us (42.86%), life in school (27.38%), and teenage life (26.19%). Some of them (40.48%) preferred reading text with 100-200 words of length. For the target needs, students wanted to learn reading for several purposes, such as students wanted to learn reading for improving their vocabulary (71.43%), finding the main idea (58.33%), finding the moral (47.62%), finding general information (48.81%), and finding the meaning of words in the reading text. Moreover, some of the students preferred pictured-cued item (46.43%), multiple-choice (44.05%), matching (40.47%), comprehension questions (40.47%), short-answer (40.48%), and ordering tasks

(29.76%) for the reading learning activities. Related to the multimedia components, students preferred the learning multimedia which consist of photograph (75%), sounds (73.81%), animation (58.33%), text (61.91%), and video (58.33%) and most of them (96.43%) preferred grammar information to include in the interactive learning multimedia. With this result, the development of the multimedia product was expected can fulfill the learners' need in learning reading.

The multimedia was developed through several steps, namely designing the course grid, developing the product (designing the multimedia flowchart and prototype), validating the product, revising the product, trying out the multimedia, and writing the final product. Based on the descriptive statistics, the data show that the interactive learning multimedia of reading was "good" based on a total mean of 4.17 on a 5-1 *Likert* scale. The content aspect data analysis results show a mean of 4 and the media aspect show a mean of 4.35. In addition, the results of the try-out indicate that the content aspect is in the "good" category with the mean of 4.01, the presentation aspect is in the "good" category with the mean of 3.83, and the media aspect is in the "good" category with the mean of 4.01.

Based on the results, it can be concluded that the appropriate interactive learning multimedia of reading for grade VII students of junior high schools consisted of four units reading, such as *Things around Us* (descriptive text)*, Professions* (descriptive text), *Foods and Drinks* (procedure text), and *Hobbies* (procedure text). Every unit in the multimedia needed is made up of the following components: *Playing with Words* to provide students with some vocabulary exercises, *Let's Read* to provide students with several reading texts/materials and tasks, *Did You Know* to provide students with simple information about grammar, *Upgrade Your Reading* to challenge students with some reading tests, and *Mini Dictionary* to help students learn unknown words.

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