

## MULTIMEDIA DEVELOPMENT IN VOCABULARY LEARNING FOR ENGLISH LANGUAGE EDUCATION PROGRAM

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### Abstract

The development of technology meets the needs of new ways in teaching language. This study aims to identify the aspects of the multimedia appeal of learning developed; to find out the attractiveness of students in vocabulary learning by using multimedia; to develop vocabulary learning for English language education students by using multimedia. This study was conducted by using research and development study. The subjects of the study consisted of 28 students in English Language Education Program. The instruments were questionnaires, observation guidelines, and test. Data were analyzed by using descriptive statistical techniques. The results of this study are: (1) the quality of multimedia learning developed in terms of aspects of content, learning, display, and programming is good. By using a score range of 1 to 5, the content aspect shows an average score of 3.75, the learning aspect shows an average score of 3.71, the display aspect shows an average score of 3.87, and programming shows an average score of 3, 75; (2) the aspect of attraction shows that the multimedia learning developed is very interesting: twenty students showed very attractive product appeal, eight students showed attractive product appeal; and (3) the use of multimedia learning English vocabulary has a good impact on the students' vocabulary learning: of 28 students, there were 27 students (95%) who completed vocabulary learning in English Language Education Program.

**Keywords** : multimedia, vocabulary, learning, language

### 1. INTRODUCTION

In KKNi based curriculum, the existence of various techniques and multimedia for teaching is needed especially using high technology. Otherwise, the fact shows that there are still many lackness of teaching learning process especially in applying appropriate interactive multimedia in the classroom.

Based on the observations of the researcher, learning vocabulary in English Language Education Program so far is still conventional. In teaching the teacher only relies on the lecture method classically. Teachers use less supporting media than books. Method of learning such it do not fulfill the principles of effective learning and do not empower the students' potential. Teaching and learning activities should be able to optimize all potential students to master the expected competencies. The teaching and learning process should be based on the principles of: (1) student-centered, (2) developing student creativity, (3) creating pleasant and challenging conditions, (4) developing a variety of values-charged abilities, (5) providing learning experiences that diverse, and (6) learning through doing.

Multimedia learning is essential since it is a component of the teaching delivery system that can be used to support the learning process. Multimedia development is based on the perception that learning will take place well, effectively, and pleasantly if it is supported by learning media that can attract students' interest and attention. Therefore, developers need to understand the

concepts, models, principles, designs, and evaluations of multimedia learning.

Related to English language learning itself, some essential factors in determining the progress of language mastery is vocabulary mastery. Vocabulary involves in all language learning activity such as in reading the texts, in answering the questions, in speaking and writing production and in understanding the instruction. Nation (2001) states vocabulary has six levels that are started from 400 words to 2.500 words. In addition, the amount of vocabulary needed to read books at level 1 is about 400 words.

The educators and students need the presence of innovative learning media in vocabulary learning. Innovative learning media is used to improve the students' basic understanding and to increase the students' learning motivation. One technology that can be used as an innovation in vocabulary learning is computer or laptop. Therefore, this study aims at developing innovative multimedia to improve students' vocabulary mastery.

#### a. Multimedia

The definition of multimedia learning is divided into two, namely the definition before the 1980s and the definition after the 1980s. Before the 1980s or in the 60s, according to Barker & Tucker, (1990), multimedia is interpreted as a collection of various different media equipment used for presentations. In this sense, multimedia is interpreted as a variety of media used for the presentation of subject matter, for example the use of wall charts or graphs made on paperboard

affixed to the wall. Tan Seng Chee & Angela F. L. Wong (2003: 217) stated that multimedia traditionally refers to the use of several media, while multimedia in today's age refers to the combined use of several media in the presentation of learning through computers.

Arief S. Sadiman, et al. (2006: 100) states that media development includes six steps, namely: (1) analyzing the needs and characteristics of students, (2)formulating instructional objectives, (3)formulating material in detail, (4)developing a measure of success, (5)writing media manuscript, and (6) conduct tests and revisions. Meanwhile, Satya Adi (2003: 5-6) states that the process of developing multimedia learning follows five steps, namely: (1) conducting an analysis process that is finding out what needs are needed to create multimedia; (2) creating a multimedia design that is making a storyboard or storyline; (3) developing, namely making motion effects, transitions, navigation structures, and variable data; (4) carrying out evaluations, namely testing products by involving the real audience; and (5) carrying out distributions, namely packaging the work to be distributed.

Multimedia developed in this study was multimedia in vocabulary learning for English Language Educations students. This research develops multimedia learning tutorial models that can be used in learning both classically and individually. Language learning in the aspects of learning English vocabulary in this study is based on one of the characteristics of students who are still beginners in English Language Education Program.

#### **b. Vocabulary**

The term vocabulary in Indonesian is parallel to the term vocabulary or lexicon. Talking about vocabulary means talking about a field of language called lexicology or vocabulary. Lexicology or vocabulary is the study of the ins and outs of words. Abu Bakar Sulaiman, A. Gani & Syafri K. (1986: 6) states that the word vocabulary comes from Sanskrit *koca* and *katha*. Both words are absorbed into Indonesian as a compound word. Vocabulary is essential to use in learning second language. Without a broad vocabulary, one cannot use the structure and function of language in communication comprehensively. Even, the quality of one's language depends on the quality of the vocabulary they have. The richer the vocabulary is owned, the greater the possibility of language skills.

Based on the description above, it can be stated that vocabulary is a word that belongs to a language or someone who forms the language in question or is used by people or groups of people concerned.

The reason why educators teach vocabulary is to facilitate students in increasing their understanding of reading (Pikulski &

Templeton, 2004: 5). Knowledge about vocabulary is the center of expertise in language. Therefore, vocabulary learning is very important. In vocabulary learning procedures and approaches are needed. Vocabulary learning in this case concerns teaching and learning vocabulary.

Nation (2001: 107-108) mentions three teaching vocabulary procedures, namely: recycled words, the second hand cloze, and the vocabulary interview. In recycled words, the procedure for teaching vocabulary moves from receptive use to productive use which focuses on deliberate learning. In the second hand cloze, the vocabulary teaching procedure includes three steps, namely students reading texts containing target vocabulary, students intentionally learning vocabulary, and students given cloze passages which are a summary of what they actually read. In the vocabulary interview, students are given the opportunity to ask questions to the teacher or to other students about certain vocabulary. One of the purposes of this procedure is to make students pay attention to aspects of knowing a word.

According to Lado (1979: 121-126), there are several steps that can be applied in vocabulary learning, namely: (1) listening to the word, (2) saying the word,(3) understanding meaning, (4) making illustrations in sentence form, (5) doing exercises in expressing meaning, (6) saying the word out loud, and (7) writing the words. Sitorus (1993: 3) states that words contained in groups, groups, and in a set of devices are always easier to learn. Furthermore Sitorus (1993: 4) reveals that there are two ways to learn vocabulary in grouping, namely groups of words that have a common basis and groups of words that have a relationship in understanding.

Learning English vocabulary to students should be adapted based on how they learn languages. It is stated by Hoskisson & Tompkins (1987: 44) that language learning must be based on how they learn languages. Teachers need to provide opportunities for students to find ways to learn. First, students need to be taught oral and written language. Second, students need to have the opportunity to imitate the forms of the language.

#### **c. Vocabulary Learning Using Multimedia**

Wood (2001: 15) states that the use of multimedia learning has the potential to improve vocabulary learning. Multimedia learning can be presented in the form of instructional games, hyperlinks, hypertext, and animation. The form of the game can provide external stimulation and display various forms of graphics. The form of hyperlinks gives an opportunity for students to get new words in various contexts through quick access to text and graphics that students want. Hypertext forms allow students to click on the desired words to hear their pronunciation and increase understanding of the new words being learned. Meanwhile, animation can improve vocabulary

learning when combined with informative and interesting narratives.

Nation (2001: 109) states that vocabulary learning with multimedia centers on conditions of noticing, retrieval, and generative use. (1) Noticing which is a form of learning using writing that is colored, highlighted, and given light; (2) Retrieval namely learning carried out by delaying or the appearance of instructions gradually; (3) Generative use, namely learning carried out by completing vocabulary in various contexts and forms such as images, writing, and sound.

Constantinescu (2007: 4) mentions four principles of teaching in computer-assisted language learning for vocabulary development. First, the teacher must pay attention to the availability of teaching tools. Second, the teacher must provide explanations in the form of text using multimedia. Third, the teacher must know the types of online material in learning English because not all of the material can be used in the classroom. Fourth, teachers must use appropriate methods and make good use of multimedia.

## 2. RESEARCH METHOD

This study was conducted by using research and development. According to Borg & Gall (2003: 772), research and development is research oriented to develop and validate the products used in education. The same is stated by Gay (1981: 10) that development research does not to make theory or test theory but to develop effective products for used.

This study is through the following six stages. First is the need analysis phase. This stage aims to gather information that is relevant to the need for the development of learning English Language Education Program. Second is the learning design stage. This stage aims to develop learning designs to produce syllabus as a basis for developing learning multimedia. Third is the stage multimedia production / development. This stage aims to produce the initial product, and then test or run on the computer to determine whether the results are in accordance with the desired or not. Fourth is the expert validation stage. This stage aims to determine the feasibility of the product being developed. Fifth is to make a revision. This stage aims to improve product quality based on suggestions for revisions to material experts and media experts. Sixth is to test the product. This stage is carried out to find out the multimedia appeal developed for students and to obtain scores on the results of the pre-test and post-test.

The research validator consisted of one material expert and one media expert. Material experts assess aspects of content and learning; Media experts assess aspects of display and programming. The subjects of the study were twenty eight students in English Language Education Program in STAIN Mandailing Natal.

The data collection instruments used were questionnaires, observation guidelines, and pre-test and post-test.

## 3. RESULTS AND DISCUSSION

Development of English vocabulary learning multimedia products in English Language Education Program begins with needs analysis, development of learning design, product development, expert validation, product revision, and then product testing. Based on these steps research data has been produced which are the results and discussion of research, namely: (1) data from expert validation, (2) observational data, and (3) data from the pre-test and post-test results. The results of the study will be discussed as follows.

### 1) Data Validation Expert

Expert validation data, namely data obtained based on the assessment of material experts and media experts through questionnaires. Material experts assess aspects of content and learning, media experts assess aspects of display and programming. After the analysis, the average score of the material expert was obtained for the content aspect of 3.75 and for the learning aspect of 3.71. By using a range of scores from 1 to 5, the average score of material expert assessment for aspects of content and learning in accordance with the guidelines for conversion of scale 5 values is classified as good criteria.

Meanwhile, the average score of expert media assessment for the display aspect was 3.87 and the programming aspect was 3.75. The average score of the media expert's assessment on the display and programming aspects is classified as a good criterion.

With the results mentioned above, it was concluded that the multimedia learning vocabulary of English Language Education class was suitable for use in learning both in terms of aspects of content and learning as well as from the aspect of display and programming because it obtained an overall grade of "B" or classified as "Good". This conclusion is taken in accordance with the feasibility value set out in this study, namely if material experts and media experts give a minimum value of "C" or with the criteria "sufficient", the product developed is considered appropriate for use in learning.

### 2) Data on Observation Results

Based on the results of large group trial it was found that twenty students from twenty eight students observed showed the attractiveness of the product in the "very interesting" criteria. While eight students showed the attractiveness of the product on the criteria of "interesting". The attractiveness criteria were obtained based on the conversion of quantitative data to scale 5 qualitative data based on Sukardjo (2005: 53-54). With the results of the one-on-one trial and large group trials, it can be concluded that the product

developed was "very interesting". This conclusion was taken because more than half the number of students showed that the attractiveness of the product was in the criteria of "very interesting".

### 3) Data on Pre-test and Post-test Results

The purpose of conducting a pre-test and post-test is to obtain student score data to find out the completeness of student learning after using the product developed. Based on the standard set of minimum learning completeness that has been set is • 70, it is known that in a large group trial of 20 students, there were 19 students who completed learning English vocabulary and only one student did not complete English vocabulary. Thus, the percentage of student learning completeness is  $19:20 \times 100\% = 95\%$ . Furthermore, the percentage of completeness is converted to qualitative data to find out the criteria. Based on the percentage conversion of learning completeness into qualitative data, it is known that 95% learning completeness includes the criteria of "very good". With these results, it can be concluded that multimedia learning in English Language Education Program in STAIN Mandailing Natal has a positive impact on student learning completeness and helps make it easier for students to learn English vocabulary.

## 4. CONCLUSION

The results of this development research can be summarized as follows. First, in terms of aspects of the content and aspects of learning, the quality of multimedia developed was considered "good" by material experts. This "good" criterion is known through the scale value conversion table 5. The average score for the material expert's assessment on the content aspect is 3.75 and the average score for the material expert's assessment on the learning aspect is 3.71. In terms of the aspect of appearance and aspects of programming, the quality of multimedia learning developed was considered "good" by media experts. Media experts give an assessment of the display aspect with an average score of 3.87 and the programming aspect with an average score of 3.75.

Second, based on observations, it was concluded that the attractiveness of the product is "very interesting", because more than half of the students stated that the product was "very attractive". This attractiveness criterion is known through the table of guidelines for converting quantitative data to qualitative data for the attractiveness of the media being developed.

Third, the use of multimedia has a positive impact on student learning completeness. Of the twenty eight students who had taken group trial there was one student who did not complete English vocabulary learning and 27 students (95%) who completed their study with an average score of 16.25 or obtained a value of 81.25 from a maximum score of 100. This learning completeness is classified as "very good".

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