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Learning vocabularies using multimedia-based Teaching Indonesian to Speakers of Other Languages (TISOL)

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Abstract. This research aims (1) to develop Indoesian vocabulary learning multimedia in TISOL Program for foreign students, (2) to reveal the quality of learning media viewed from content, learning, appearance, and programming aspects, (3) to know foreign students' learning mastery after learning Indonesian vocabularies with using multimedia. It was a developmental research. Research validators were an expert in TISOL and an expert in learning multimedia. Research subjects consist of five foreign students tested one by one, and twenty-five students tested in huge group. Research insturments were questionnaire, observation, and questions for pre-test and post-test. Data were analyzed by using the descriptive statistics technique. The results show the followings. (1) The development of Indonesian vocabulary learning multimedia is TISOL program with six stages, namely analyzing, designing, producing, validating, revising, and testing. (2) The quality of developed learning multimedia from content, learning, appearance, and programming aspects is good. With using a scale from 1-5 score, the content aspect shows an average score of 3.75, learning aspect indicates average score of 3.71, appearance aspect deals with an average score of 3.87, and programming aspect reflects an average score of 3.75. (3) Interest aspect shows that developed learning multimedia is very interesting as demonstrated in one-by-one test, in which from three students observed, two of them respond that the product is very interesting, but one claims that the the product is interesting; while developed learning multimedia gets different responds in a huge group test, in which from twenty students, twelve students state that the product is very interesting and the rest state that the product is interesting. (4) The use of Indonesian vocabulary learning multimedia in TISOL program gives a good impact to students' learning mastery. In a huge group test, there are 19 students (95%) who master Indonesian vocabularies in tisol program.

Keywords: Development, Multimedia, Vocabulary, TISOL, Foreign Students.

1. Introduction

TISOL (Teaching Indonesian to Speakers of Other Languages) program begins increasingly developing, in both Indonesia and foreign countries. The result of observation shows that all this time, TISOL learning is still conventional. In teaching process, lecturers only rely on lecturing method classically [1]. They rarely use some supported media, except books. This method less fulfils effective learning priciples and less empowers students' potential. Teaching and learning activity should be able to optimize all potentials owned by student to master the expected competencies. Besides, this process should also be based on some principles that: (1) center on students, (2) develop students' creativities, (3) create pleasure and challenging conditions, (4) develop various skills containing values, (5) provide various learning experiences, and (6) learn by doing [2].

Based on the explanation above, both lecturers and students in TISOL program need the innovation in learning media. This learning media innovation is used to improve the quality of learning. One technology product that can be used as a learning innovation is computer. This is similar to Surjono [3] who stated that computer as one of technology products that is appropriate to be used as a learning aid. The existence of computer has been widely used, but not been applied for improving students' achievement, especially in TISOL learning. This condition is supported that the use of computer in educational field, now, is still not optimal [4].

Learning multimedia is a component of learning delivery system that can be used to support learning process. The development of multimedia is based on a perception that learning will be good, effective and pleasure since it is supported by learning media that can attract students' interest and attention [5]. Hence, the development needs to understand the concept, model, principle, design, and evaluation of learning multimedia.

2. Research Method

A developmental research was a research oriented to develop and validate products used in education [6]. It was in line with Gay [7] who stated that the developmental research was not to create a theory or to test a theory but to develop an effective product to be used in learning process. In this study, some models, which became references, were developmental research method by Borg & Gall [6] learning design development model by Dick, Carey [8], and product development model. These development models were adapted so that got the simpler developmental model, which was used as a research base.

This research was conducted through six stages. The first was the need analysis. This stage aimed to obtain the relevant information related to the need of multimedia development for vocabulary learning in Tisol program. The second was the learning design, which aimed to develop learning design until to produce a syllabus as a reference to develop learning multimedia. The third was the multimedia production/development with the aim to produce the intial product, and then it was tested or used in a computer to ensure if the result was appropriate with what is expected or not. The fourth was experts' validation, aiming to know the feasibility of the developed product. The fifth was the revision with aiming to improve the quality of the product with reference to the advices from experts in learning material and learning media. The sixth was the tes. This stage was conducted to know the attractiveness of the developed multimedia and to obtain the result of pre-test and post-test.

Research validators consisted of experts in learning material and learning media. The expert of learning material assessed aspects of content and learning while the expert in learning media assessed aspects of appearance and programming. Subjects for testing this study were students of TISOL program in Universitas Sebelas Maret (UNS) as many as twenty-five students. The one-by-one test involved three students, including two male students and a female student. Besides, the huge group test involved twenty-five students, including ten male students and fifteen female students.

Instruments of data collection were questionnaire, observation guide, and questions for pre-test and post-test. The questionnaire was used to obtaine the data related to the quality of learning material feasibility and learning media feasibility. The obrservation guide was used as a guide in observing studen ts' attitude during the process of test to know students' interest on the product. The questions for pre-test and post-test were used to know students' learning mastery after using multimedia product developed. Types of research data were qualitative and quantitative data. The

data were analyzed with descriptive statistics technique. The qualitative data were experts' comments and advices for product improvement, analyzed and described with qualitative descriptive method to revise the developed product. The quantitative data were assessment score, observation result score, pre-test and post-test scores from the experts. The assessment score was analyzed descriptively with reference to the table of score convertion. The quantitative data of product attractiveness from the observation result were changed into the qualitative one with reference to the table of score convertion. Pre-test and post-test scores were analyzed by calculating the presentage of students who got score of 70 and changed the quantitative data of learning mastery presentage to the qualitative one with reference to the table of score convertion proposed by Bloom, Madaus & & Hastings [9]

3. Results and Discussion

The development of vocabulary learning multimedia product in TISOL program is started with need analysis, experts' validation, product revision, and testing product. Based on these stages, the research has obtained the data that become the result and discussion, namely (1) the data of experts' validation result, (2) the data of observation result, and (3) the data of pre-test and post-test results [10]. Those are discussed as the followings.

Experts' validation data were obtained the data with reference to the assessment from the experts in learning material and learning media through questionnaire. The expert in learning material assesses the content and learning aspects, while the expert in media assesses the appearance and programming aspects [11]. After conducting the analysis, the research obtains the average score of assessment from the expert in learning material as much as 3.78 for the content aspect, and 3.72 for the learning aspect. Based on the convertion value, the average scores related to learning material are categorized good. Besides, the average score of the assessment from the expert in learning media is 3.88 for appearance aspect and 3.76 for programming aspect. These scores are categorized good. Hence, it is concluded that learning vocabulary multimedia in TISOL program is suitable to be used in learning process viewed from content, learning, appearance and programming aspects because it obtains the total average score of "B" or "Good". This is in accordance with the qualification score determined indicated that if the experts in learning material and learning media give a minimum score of "C" or "enough", the developed product is considered qualified to be usd in learning process [12].

Based on the one-by-one test, the research reveals that four students respond to the product with "very interesting" criterium, while one of them gives an "interesting" criterium. In the huge group test, it indicates that twenty students reflect that the product is "very interesting". Meanwhile, five students show that product is "interesting". The criteria of interest are obtained by converting the quantitative data to the qualitative on with 5 scale proposed [13]. From those results, it is concluded that the developed product is "very interesting." This is due to that more than half of total students claim that the product is "very interesting".

The aim in conducting pre-test and post-test is to obtain students' score data on finding out students' learning mastery after using the developed product. Regarding the standard of learning mastery minimum score of 75, it is indicated that in the huge group test of 20 students, there are 19 students who master Indonesian vocabulary learning, and only one who does not. Hence, the percentage of students' learning mastery is 19: 20 x 100% = 95%. Besides, this percentage is converted to the qualitative data to know its criterium. With reference to the convertion percentage of learning mastery, it is reflected the "very good" criterium. Therefore, Indonesian vocabulary learning multimedia in TISOL Program affects students' learning mastery positively and helps them to easily learn Indonesian vocabularies [14].

This learning result is definitely the success of technology in learning process. One of technology products is computer, which, as proposed by Tylor [15], has three functions in the language learning, namely means, tutor, and tutee. Computer as a means can be used as a program to process words such as writing a story, poetry, or other literary works. Computer as a tutor or known as computer assisted instruction (CAI) can function as teaching aids or media. Computer as tutee can be employed in learning computer language and computer programming.

This research represents that the use of learning multimedia potentially improves vocabulary learning, as stated by Wood [16]. Learning multimedia can be provided in terms of games, hyperlink, hypertext, and animation. Games give external stimulation and show various shape of

graphs. Hyperlink gives opportunities to students to obtain new words in some contexts through a fast access to texts or graphs students want. Hypertext makes students possible to click words they want in order to listen its pronunciations and to improve students' understanding toward new words learned. Meanwhile, animation can increase vocabulary learning since it is combined with informative and interesting narrations.

The results of this research also corelates to Nation's opinion [17] that vocabulary learning with multimedia centers on the conditions of noticing, retrieval, dan generative use. (1) Noticing is type of learning with using writing forms modified by colour, highlight, and light; (2) retrieval is learning conducted with gradually postponing or emerging guides; and (3) generative use is learning conducted with completing vocabularies in various contexts and types, such as pictures, writing forms, and voices.

Multimedia are very helpful in learning process and affect both lecturers and students. The results of this research are also connected to the role of lecturers in vocabulary learning. It is relevant with Constantinescu's claim [18] about four teaching principles in language learning with using computer to improve vocabularies. First, lecturers have to notice the availability of learning tools. Second, lecturers have to give their explanation in terms of texts with using multimedia. Third, lecturers have to know types of online material in Indonesian learning because not all of them can be used in the class. Fourth, lecturers have to utilize an appropriate method and multimedia wisely.

4. Conclusion

The result of this developmental research can be conculed as the followings. First, the development of multimedia in vocabulary learning in TISOL Program has been carried out through six stages, namely (1) conducting need analysis, (2) developing learning design, (2) developing learning multimedia product, (4) conducting validation from experts, (5) conducting revision, and (6) conducting test. Second, the quality of developed multimedia is considered "good" by the expert of learning material as viewed from content and learning aspects. The "good" criterium is revealed from the table of score convertion with 5 scale. The average score of the expert' assessment is 3.75 in content aspect and 3.72 in learning aspect. Third, the quality of developed learning multimedia is categorized "good" by the expert of learning material as viewed from appearance and programming aspects. The expert gives an average score of 3.87 for appearance and 3.75 for programming. Fourth, from the observation result, the product attractiveness reflects "very interesting" criterium because more than a half of total sudents claim the product is "very interesting". This criterium is represented in the table of convertion guide from quantitative to qualitative data. Fifth, the use of multimedia has a possive impact toward students' learning mastery. From twenty-five students participating the huge group test, 19 students (95%) pass with average score of 16.25 or 81.25 from maximum score of 100. This learning mastery is categorized "very good".

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