

Development of Learning Module on Observation Result Report Text Based Interactive Multimedia

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Abstract : *The purpose of this research is to know: (1) The process of developing learning module of observation result report text based on interactive multimedia, (2) the feasibility of learning module tested with matter validation and design on the text of observation report based on interactive multimedia, (3) the effectiveness of developing learning module of observation result report text based on interactive multimedia on class X student SMK Negeri 1 Percut Sei Tuan. This type of research is research and development based on Borg and Gall development model. The trial subjects consist of matter experts, design experts, Indonesian teachers, and SMK Negeri 1 Percut Sei Tuan students. Data on the quality of this product is collected through questionnaires and test writing text reports of observations. The results of this study show that : ((1) validation by the matter expert is considered feasible with the average acquisition of 91.25% with very good category, the feasibility of presentation is 97.5% with very good category, interactive multimedia aspect is obtained on average 95,8% with very good category , the language aspect obtained an average of 98.95% with very good category. (2) validation by design experts with an average gain of 82.15% In very good category. (3) Individual trial is obtained on average 82.38% with good category. (4) The acquisition of small group trial obtained an average of 86.67% with good category. (5) The acquisition of limited field trial results obtained an average of 96.86% with very good category. (6) The effectiveness of the learning module shows that the average pretest score (preliminary test) is 71.02% with sufficient category and the mean post test is 80.05% with good category. Thus the learning text module interactive observation report based on interactive multimedia is feasible and effective use in the learning process and can be used as a learning resource.*

Keywords - *development, observation result report text, interactive multimedia*

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I. Introduction

The Indonesian language learning currently uses the 2013 curriculum with loads of text. Text-based learning is believed to help students improve their knowledge and abilities in the learning process. This is evidenced by the research of Subyantoro in his research entitled "Development of Textbook Writing Enrichment Writing Reports Results Observation that Contains Local Wisdom for Class X High School Students", states that "text-based learning is an appropriate and effective technique as a strategy for increase the knowledge and ability of learners in writing. "Therefore, text-based learning is used as the basis for developing the basic competencies of Indonesian language subjects in the field of knowledge and skills in the curriculum of 2013[1].

The fact is that teachers do not understand the basic concepts in the development of learning resources and teachers are still using the book published by minister of education in 2016 as the main source of learning. This is evidenced by the results of interviews obtained from two teachers of Indonesian Language at SMK Negeri 1 Percut Sei Tuan, it is known that the learning resources used in the learning process using only one resource that produced by minister of education in that is titled " Indonesian Revised Edition 2016".

The use of modules in learning is easy to achieve effective and efficient learning. The learning module makes it easier for students to achieve effective and efficient learning goals. Modules containing matters, methods, limitations, and ways of evaluating are systematically and attractively designed to achieve the expected competencies.

One of the Indonesian Language matter in class X Senior High School is the Text of Observation Result Report. The activity of writing the text of the observation report is quite difficult to observe the students. This is evidenced in previous research by Fania [2], Komang Krisna Kuarwati [3] states that students are difficult to write the text of the observation results in the cause of some obstacles that students have not

understood the structure, the Indonesian spelling, and the elements and text of the observation report content. In addition, data obtained that the results of student learning to write the text of the observation results are still low.

The problems that have been described have the initiative to develop an interactive multimedia-charged module, so that students can more easily write the text of observation reports that assisted images, animation, video, sound into the text. interactive learning conditions support students to be able to understand the lessons taught in the classroom. This is evidenced by Dongsong [4] stating that three types of interaction in learning: learner-instruction, learner learn and learner-content. In Learner-interaction is a major factor accounting for cognitive learning. Learner-learner interaction fosters collaborative learning, learner content interaction refers of any interactive activities between the learner and instructional content online learning environment.

Interactive multimedia learning includes several important components. This is supported by research Bardi Jailani [5] states that interactive multimedia includes four important components: theory and practice, development design, and evaluation, processes and resources and for learning. In this study, researchers designed a more interesting digital module dibandingkan print module commonly used in learning. This module is designed to be valid used by teachers and students in school so as to improve student's creativity and learning outcomes. The modules developed include learning objectives, systematic presentation of matters and sentences that are easily understood by students.

II. Literature

Module

James D Russel defines that the module is an instructional package dealing with single conceptual unit of subject matter. It is attempt to individual learning by enabling the student to master one unit of contents before moving to another. A multimedia learning experiences are often presented in a self instructional format. The student controls the rate and intensity of his study..... The student can take it to the library, to a study carrel or to home. The length may from only a few minutes of student time to several hours. The module can be used individually or combined in a variety of different sequences. Module is one form of teaching matters that contains a set of planned learning experience and designed so that learners are able to achieve specific competencies.

Text of Observation Result Report

Kosasi [6] states that the text of the observation report is a text that presents the facts obtained through observation. Sri Wilujeng et al declared that "the text of a report or text text is a text whose content describes something as it is as a result of systematic observation or analysis [7]. the results of research Lifa Yola Febrianti states that the text of the observation report consists of the general definition (opening), section description, and description of benefits. The common definition part (opening) contains an understanding of something being discussed. Description section, contains a description of something in detail. Meanwhile, the description of the benefits, is a part that contains benefits or uses [8].

Interactive Multimedia

Characteristics of interactive multimedia describes a media in which there are audio images, and video. Lori L. Scarlatos [9] stated that media contents what characterizes the design of an interactive multimedia application is that it is divided into creating the media contents and developing the scenario. While the media contents usually determine the formats of images, video, audio and text that are common to the platform, the format of the scenario depends on the authoring system used. The advantages of interactive multimedia can also be used as a learning guide. This is according to Farida Yufarina Rosita's opinion that the advantages of interactive multimedia are instructional tools, as instructional tool, and as learning resources such as interactive multimedia are used to store a series of radiograph slides.

III. Research Methodology

This research was conducted at SMK Negeri 1 Percut Sei Tuan In class X Learning Year 2017/2018. samples in this study are students of class X-TKJ (Computer and network engineering), 2 Indonesian teachers in SMK Negeri 1 Percut Sei Tuan. Research method using Research and Development (R & D)

Data collection using several ways. Among the ways data collection is done is through the first validation of matters, design, and student responses. The validation sheet is used to get the valuation data from the validator about the developed product.

Table 1. Grid questionnaire Validation and Expert Assessment of Learning Matter

	Component Assessment Indicator	Number of questions
Feasibility of content	Conformity and depth of concept with Curriculum 2013	2
	Matter Accuracy	5
	Learning Support Matter	2
Feasibility of Presentation of the Learning Module	Module presentation technique	5
	Presentation and learning	3
	Completed Presentation	5
Interactive Multimedia Aspects	Apperception	3
	Strategy	3
Aspect of Language	Communicative	3
	Compatibility with the level of development of learners	2
	Guidance and coherence of mind	2
	The use of terms, images, and symbols	3

Then the data is analyzed descriptively quantitative, that is calculate percentage of indicator for each category on instructional matter developed. Percentage Score = (Total of indicators per category) / (Total of indicator total category) x 100%

Based on the calculation of the formula above, the figure is generated in percent. The classification of scores is then changed to classification in percentage form [10], then interpreted with qualitative sentences listed in table 2 below.

Table 2. Criteria Percentage of Occurrence Indicators

responses	score
very good	85% ≤ X < 100%
good	75% ≤ X < 84%
enough	65% ≤ X < 74%
bad	55% ≤ X < 64%
very bad	0% ≤ X < 54%

IV. Results

Research development is aimed to get the product in the form of module based interactive multimedia on the text matter of observation report. The process of research development is done several stages of doing needs analysis and curriculum analysis obtained results that students need teaching matters that can attract students to learn, design teaching matters, develop teaching matters based on interactive multimedia, perform matter and design experts validation, try individual, small group and limited field.

Requirement of Teaching Matter

Analysis of requirements teaching matter is done before module development. Hold the first needs analysis that is to analyze the problem and needs in SMK Negeri 1 Percut Sei Tuan by distributing questionnaires to 2 teachers and 35 students containing questions related to module development. Results of the questionnaire were found to be 94.6% of teachers and students need a text learning module of the observation report of interactive multimedia content in understanding the matter in the learning process and can be studied by students individually.

The result of requirement analysis shows that 94.6% of students need interesting and easy to understand learning matters in the learning process. The presence of good teaching matters will help students in helping students learn the text of the observation report. Students are interested in module based interactive multimedia for observational report learning. The existence of learning process through computer media make students interested to learn it. 97.2% of students felt helped by the existence of module based interactive multimedia. Based on the above explanation can be concluded that the teaching matters that are used so far not in accordance with the needs of students. Therefore, the development of module based multimedia matter experts and 2 experts interactive multimedia design will help students to understand the text matter of the observation report.

Interactive multimedia is selected in the development of module aimed so that students are able to better understand about the text of observation report. Then students can explore their ability by answering some questions that have been completed with answers so that students are able to measure their own ability.

Feasibility of Teaching Matters

After the teaching matters have been developed, the next step is to test the feasibility of the learning module by validating by the matter experts and design experts. The learning module is validated by 2 design

experts. Aspects of assessment include 4 points of content feasibility, presentation feasibility, interactive multimedia aspects, and language assessment. Overall the validation results of the matter experts and the design of the developed learning module are in the "Good".

The content feasibility aspect obtained an average of 91.25% with the category of 'very good'. Validation results show that the indicators and learning objectives developed are in accordance with the core competencies and basic competencies contained in the curriculum 2013. The matter presented in the learning module that has been developed is in accordance with the core competence and basic competence. Thus, the matter contained in the module of learning, especially the text matter of the observation report can already be used by teachers and students in learning.

Aspects of presentation feasibility obtained 97.5% with very good category. Validation results indicate that the presentation of learning has started from the easy to the difficult. In addition, the instructions have been displayed either printed or not, instructional instructions, training questions at the end of each lesson and evaluation questions to measure students' final ability. Thus, in terms of presentation of learning module can be used teachers and students in the learning process.

Interactive multimedia aspect was obtained on average 95,8% with very good category. From the statement of the validator stated that the interactive multimedia aspect already contained in the learning module. Thus it can be concluded that the developed learning module can be used by teachers and students on text learning reports of observations.

Aspects of language obtained an average of 98.95% with very good category. From the validator's statement about the language it states that the language used is good enough for students to understand the matter easily. Thus it can be concluded that the developed learning module can be used by teachers and students on text learning reports of observations.

The average value is obtained after the revision of the validator. Improvements in the learning module are the addition of matter and examples of texts. The validator also revised for matter based interactive multimedia to appear in the understanding of the lesson matter. Other improvements are the addition of glossaries, summaries, and bibliography in a digital module.

The results of design expert validation on the learning module based interactive multimedia show that the background design has an average of 83.92%, the contents design has an average of 82.19%, the skin tone has an average of 83.33%, and the content illustration has a flat 79,16%. Improvements to the dominant module on sound, image, video, background color. The sound in the digital module is replaced with a more slow and not too fast sound. The image in the module that has been made digital is replaced with an image corresponding to the proposed module contrast for the student of SMK / SMA. Added video in digital module. The background color is replaced with a more slow and interesting color to be viewed by the students. After making a revision with the validator expert, then obtained the data as mentioned above.

Based on the above description about the expert matter and design experts, it can be collected that the learning model based on learning multimedia on the text matter of the observation report that is designed for the students of class X SMK Negeri 1 Percut Sei Tuan is categorized as very valid and feasible to be used in learning the text of the observation report . This is apparent from a validation questionnaire given to 4 expert lecturers. Thus, the learning module can already be piloted to the students to see the functionality and effectiveness of the modules that have been developed.

In accordance with Borg & Gall's research and development flow, the trials conducted on the students include 3 stages: individual trials (3 students), small group trials (9 people) and limited field trials (35 people). In the individual trial, the average score was 82.13% with good category. In the first stage there are some things that need to be fixed: the addition of the matter. In the small group trial, the percentage obtained was 83.33% with good category. Furthermore, in limited field trials obtained an average of 96.86% with very good category. Based on these data, it can be concluded that the learning module based interactive multimedia can be used by teachers and students well.

Effectiveness of the Learning Module

Effectiveness of learning module seen from result of student learning test by using learning module which have been designed. The results obtained from the evaluation test value write the text of the observation report. The test was given to 35 students before (pretest) and after (posttest) using the learning module. The results showed that the average pretest (pretest) value was 71.02% with sufficient category and the final test score was 80.05% with good category. If reviewed from the pretest test (pretest) there are 28 students who are valued under the masses with sufficient category and less. While in the final test (posttest) there are 4 students who are worth under the mask with enough category. Based on the evaluation test, it is known that the cause of non-completeness of students in writing the text of the observation result is lack of understanding of the structure of observation report and less able to develop the observed text content of the observed.

The difference in percentage increase from pretest to posttest is 9.03%. The improvement of the initial test result to the final test is evidence that the interactive multimedia-based learning module is effectively used by teachers and students on the text of the observation report. Improving learning outcomes through the development of learning modules shows that there is an improvement in improving student learning outcomes. This is supported by Prastowo [11] which states that the function of teaching aids in individual learning as the main media in the learning process, as a tool used to organize and supervise learners in obtaining information and as a supporter of individual learning media. Selection of base in developing learning module also support improve student learning outcomes. Interactive multimedia learning can improve students' learning achievement creatively and innovatively in both group and individual learning.

V. Conclusion

Based on the results of research that has been described in the development of learning module text report of observation results based on interactive multimedia, it can be concluded that requirement analysis results show that 94.6% of teachers and students need a text learning module interactive observation report based on interactive multimedia in understanding the matter in the learning process and can be studied by students individually, The product of learning module based interactive multimedia on the text matter of observation report developed for the students of class X SMK Negeri 1 Percut Sei Tuan is eligible and feasible to be used. This is evidenced by the validation results of the matter content feasibility experts obtained an average of 91.25% with very good category, the feasibility of the presentation obtained 97.5% with very good category, interactive multimedia aspects obtained an average of 95.8% with very good category , the language aspect obtained an average of 98.95% with very good category. The results of the assessment by the expert design of learning module based interactive multimedia that has been developed is on the criteria of 'very good' with the percentage of 82.15% average. The percentage results are obtained based on sub component in the form of background design, content design, typography, and illustration of contents. Background design got 83.92%, content design get percentage as much as 82.19%. For typography gained as much as 83.33%. The content illustration design obtained 79.16% percentage, The use of module observation report result based interactive multimedia is more effective than textbooks used by students. This is evidenced by pretest and final tests (posttest) conducted to see student learning outcomes. The result of analysis shows that the pretest value (preliminary test) 71.02% with enough category and the final test value (posttest) is 80.05% with good category.

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