Development of Macromedia Flash Based Materials on Learning Social Science Knowledge in Class Xi Smk Islam Bustanul Ulum with Model Assure

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ABSTRACT
Based on the results of preliminary studies obtained, 76.45% of the students learn the source of learning books and student worksheets provided by the school while 23.55% utilize internet and electronic technology as additional learning materials of social science. Based on the questionnaire of learning style characteristics of learners who have visual learning style of 75%, 60% audio learning style, and kinesthetic learning style of 50%. So this research wants to make product of Macromedia Flash Based Instructional Material in Social Science Lesson of Class XI High School vocational Islam Bustanul Ulum Model Assure. Because learners have tendency to learn visually thus the use of Macromedia Flash combines images, animations, video and sound into a single unit depicted in a scene or frame animation that can make learning history more interesting for students and can help teachers to ease in the delivery of learning and knowledge sharing.
Keywords: *Learning Method, Learning of Materials, Macromedia Flash*

1. INTRODUCTION

Based on observations and interviews conducted at 3 vocational schools in Jember District, namely Vocational School 5 Jember, Vocational High School 4 Jember, Islamic Vocational School Bustanul Ulum Jember showed that teaching materials used by teachers still tend to be less varied. Scientific social sciences teachers only use power points, package books, and students' worksheets. Learning resources used by the students are very limited, this resulted in the students still having difficulty in understanding the material presented by the teacher, the lack of time in the delivery of the material also greatly affect the process of implementation of learning so that learning goes less effective if students only listen to explanations from teachers in a lesson/lecture.

Teachers must be able to harmonize and combine methods, equipment, and learning techniques well so that the learning of social science knowledge becomes interesting, important and easy to digest (Kochhar, 2008: 286). Macromedia flash can create animations that have artistic value and add attraction to the learning process (Gorofalo, 2004: 2). Interaction of the learners with the media is a component of learning delivery strategy that refers to the activities undertaken by students and how the role of media helps in stimulating learning activities (Degeng, 2015: 162)

2. THEORITICAL REVIEW

2.1 Development of learning

According to the Directorate of High School Development (2008: 6), understanding of teaching materials is all forms of materials used to assist teachers in carrying out teaching and learning activities. The material in question can be either written materials or unwritten materials. Koesnandar (2008: 18) describes the types of teaching materials based on the subject consisting of two types: (a) teaching materials deliberately designed for learning, such as books, handouts, student worksheets and modules; (b) teaching materials that are not designed but can be used for learning, such as clippings, newspapers, films, commercials or news. Koesnandar also stated that if viewed from the function, the teaching materials that are designed consist of three groups of presentation materials, reference materials, and self study materials.

Based on the technology used, the Directorate of High School Development (2008: 11) classifies teaching materials into four categories: printed materials such as handouts, books, modules, students' activity sheets, brochures, leaflets, wallcharts, photos/drawings and models /Maket. Audio teaching materials include cassettes, radio, LPs, and audio compact discs. Hearing audiences (audio visual) such as video compact disks, and movies. Interactive teaching materials such as CAI (Computer Assisted Instruction), interactive multimedia compact disc (CD) and learning materials based on web based learning materials.

2.2 Learning Using Macromedia Flash

According to Garofalo (2004: 3), Macromedia flash has a feature of making animations. Animation has many benefits such as helping to understand learning materials, making them more meaningful, making learning materials easier to grasp and helping to visualize the learning materials. Macromedia flash is an animation used to create designs, presentation tools, and publications that require the availability of facilities for its users (Wahyono, 2006: 1) so that learning will not seem monotonous (Fardiana 2012: 21). Tools that are owned by macromedia flash can also be utilized to help further animate the material in social science learning process to be more real, relevant and interesting for learners (Siswoutomo, 2005: 2).

To overcome some of the deficiencies possessed by Macromedia Flash, some other type of software can be utilized to collaborate the utilization of Macromedia Flash. Macromedia Flash has several features that can be used to import images, videos, sounds and other files that are managed by some other type of image design software such as Adobe Photoshop, Adobe ImageReady, Windows Movie Maker and so on.

2.3 Development of Social Science Lessons with *ASSURE* Model

Teaching materials are a set of learning tools that contain learning materials, methods, limitations, and how to evaluate systematically designed and interesting goals, achieving competence or sub-competence with all its complexity (Chomsin, 2008: 40). Research development is a series of processes or steps that are used to develop a new product or improve products that have been there before (Punaji, 2012: 214). This model was born based on the assumption of Gagne (1985: 76) that the teaching-learning process is through several stages called "events of instruction". The ASSURE model is a step to systematically implement the

learning in the classroom by combining the use of technology and media. Stages to create a learning design that can be seen from the model's name, ASSURE. According to Smaldino (2014: 86), "A" means Analyze learners, "S" means State standard and Objectives, second "S" means Select strategy, technology, media, and materials, "U" means Utilize technology, media and materials, "R" means Require learner participation and "E" means Evaluate And revise. Gagne (2005: 18) defined instructional design as a set of learning resources and procedures used to facilitate the ongoing learning process. Analysis of the characteristics of learners according to Smaldino (2014: 112) are general characteristics, specific entry competencies and learning style.

3. RESEARCH METHODS

3.1 Types and Methods of Development

Type of research conducted by researchers is research and development (R & D), it is more directed to produce products, design, and process. Research development is more focused on the field of study design or in the form of design of teaching materials and products such as media and learning process. The development model in this research uses procedural development research procedure using ASSURE research model.

3.2 Data Collection Instruments

Data collection was made possible using questionnaire and test instruments. Questionnaires are used to collect data from review results from design experts/technolok, material experts/content, and linguists. During individual and small group trials using validation from media and design experts, materials/content experts, and linguists to determine the level of eligibility of teaching materials. Field test process using test. The test is used to determine the learning outcomes of learners before the development of teaching materials (pretest) and after doing the development of teaching materials (post-test) in students class XI Macromedia 1 as many as 35 students. The test is used to determine the effectiveness of teaching materials that have been used.

3.3 Proses Pengembangan Bahan Ajar dengan Model ASSURE

Development research procedures describe some process or steps taken to make a product. As explained in the previous section, the development procedure in this study uses an ASSURE learning design model consisting of six stages: Analyze Learner, State Objective, Select Methods, Media, and Materials, Utilize Media and Materials, Require Learner Participation, Evaluate and Revise.

3.4 Product Results

Expert tests are conducted by experts in reviewing the initial product of animation media with Macromedia Flash on history learning. The experts consist of (1) a media specialist; (2) the content or content expert of the lecture and (3) the linguist. The small group test is a small group trial phase carried out by educators on Social Sciences subjects and 9 students to review, assess and obtain suggestions and comments on the learning media that have been produced before the teaching media enters the field trial stage. Next Field trials, including Experimental (assessment) by experts (expert appraisal), development testing.

3.5 Data Analysis

Experimental test of field of study and experiment of instructional media, and user trial of product were analyzed by using formula as below:

$$P = \frac{\sum X}{\sum Xi} \times 100$$

Information:
P : percentage
$\sum X$: The total number of respondents' answers
$\sum Xi$: The total number of respondents' answers
Σxi : Total number of ideal values in 1 item
100%: constants (Arikunto, 2008: 216) 100%

After obtaining data about learning outcomes of learners before and after the use of teaching materials Macromedia Flash, it can be measured by the following formula:

$$ER = \frac{Mx2 - Mx1}{\left(\frac{Mx1 + Mx2}{2}\right)} \; x \; 100\%$$

Information:
ER: Level of relative effectiveness
Mx1: Class average value after action
Mx2: The average value of the class before the action is taken

4.   RESEARCH RESULT

4.1   Small group trial results
Based on the analysis, it is known that the percentage of Macromedia Flash resource using ASSURE is as follows:

$$P = \frac{44}{50} \times 100\% = 88\%$$

Information:
P   : Percentage
$\sum_X$: The total number of respondents' answers
$\sum_{Xi}$: Total number of ideal values in 1 item
100%: Constant (Arikunto, 2008:216)

Product Feasibility Table

Level Achievement	Qualification	Description
85%-100%	Very good	No need to be revised
75%-84%	good	No need to be revised
65%-74%	Enough	Revised
55%-64%	Less	Revised
0 – 54%	Less once	Revised

4.2   Test Data Analysis Learning Outcomes
Pretest and posttest are given to the learner during the test. Based on the results of field tests, it can be seen that the average value before learners do development of teaching materials Macromedia Flash using ASSURE of 59.857, whereas after done the teaching materials Macromedia Flash using ASSURE average value before the learner becomes 90.285. Both learning achievement results through pretest and posttest is then continued to test that is using Paired Sample t-Test by using the help of SPSS program.

4.3   Analysis of hypothesis testing
The result of data analysis of table 2 shows that between Pretest and Posttest different with significance (P <0.000; df = 34; t= -17.184), with difference difference between pretest and posttest of -30.42865. The negative value on the second difference shows the pretest is lower than the posttest. This means that with the development of teaching materials Macromedia Flash using ASSURE has been able to improve student learning outcomes by 30.42865 compared with previous conditions. Based on the results of the analysis, it can be concluded that the teaching materials in Macromedia Flash using ASSURE model proved significantly effective to improve learning achievement learners learn outcomes.

Based on the results of data analysis using t-test conducted on field test of the development of teaching materials Macromedia Flash on social sciences in Vocational school using ASSURE model can improve the effectiveness in the learning process.

After obtaining data about learning outcomes of learners before and after the use of teaching materials in Macromedia Flash can be measured by the following formula:

$$ER = \frac{92.285 - 49}{\left(\frac{49 + 92.285}{2}\right)} \, x \, 100\% = 61.273$$

Criteria for Interpretation of the Relative Effectiveness Test

Relative Effectiveness Test Results	Categories of Effectiveness
91%-100%	Very High Effectiveness
71%-90%	High Effectiveness
31%-70%	Medium Effectiveness
11%-30%	Low Effectiveness
0%-10%	Very Low Effectiveness

Source:Masyhud (2012:299-300)

5. CONCLUSION

Validation results for learning material experts earn a percentage of 92.17% fall into the category very well. Validation results for experts learning media earn a percentage of 95.81% fall into the category very well. Validation results for linguists get a percentage of 94% into the category very well.

Development of teaching materials Macromedia Flash on learning Science Social Knowledge in Vocational School by using ASSURE able to support learning Indonesian history into effective learning. This can be seen from the effectiveness test result by using t test of non-independent sample test that is significance (P <0.000; df = 34; t=-17.785), with difference between pretest and posttest equal to -30.428. The negative value on the second difference shows the pretest is lower than the posttest. This means that with the development of teaching materials in Macromedia Flash using ASSURE model has been able to improve student learning outcomes by 30.428% compared with previous conditions. The result of the relative effectiveness analysis of Macromedia Flash teaching materials when used in the learning process is 61.237%, based on the relative effectiveness table these results are included in moderate effectiveness.

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