Interactive Multimedia Development Based on Adobe Flash Cs6 on the Hazards of Free Association

by Al Azharsyah, Budi Valianto, Novita, Indra Kasih

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Al Azharsyah[1], Budi Valianto[2], Novita[3], Indra Kasih[4]
[1,2,3,4]Universitas Negeri Medan, Indonesia
coklatmaroon@gmail.com, valiantobudi@gmail.com, noviade@unimed.ac.id, kasihindra833@gmail.com

Abstract

This study aims to develop learning materials on the dangers of promiscuity through interactive multimedia based on Adobe Flash CS6 for class VIII students of SMPN 10 Langsa. This study uses the Brog & Gall development model. The results of the validation include two aspects of the assessment, namely the quality of the learning material by 97.2% then the content of the learning material obtains a result of 88.6 with very good criteria. The results of the feasibility of learning media validation by media design experts were declared "very good". The results of the validation include two aspects of the assessment, namely the aspect of the display of the learning media which obtained 90.9% with very good criteria, the programming aspect obtained very good results with a presentation of 91.7% with very good criteria. The results of the assessment carried out by five teachers obtained an average number of 85 with very good criteria. Then in the test of student responses to learning media in the form of interactive multimedia based on Adobe Flash CS6 which was developed, the results of each test were very good. In the small group test, the results obtained are 82.5% with good criteria, and the large group test results are 85.2% with very good criteria.

I. Introduction

Education is one of the efforts to improve the ability of human intelligence, thus he is able to improve the quality of his life. So, to create the highest quality of human resources, education is becoming an important factor to be considered. The importance of education is also reflected at MPR No. II/MPR/1993 which states that the national education aims to improve the quality of Indonesia people that is religious people, and pious to God Almighty, noble character, has high personality, discipline, work hard, responsible, independent, smart, healthy, physically and mentally healthy. (Sugiharto in Saleh et al, 2020)

Free association consists of two words, namely association and free. According to the Big Indonesian Dictionary (KBBI) association means making friends in social life, while free means being free or not bound. Through these two understandings, it can be concluded that promiscuity means friendships in social life that are loose. Gunarsa (2004: 50), promiscuity is a broad association between young men and women. Not too much emphasis on a compact grouping between two people, but between many young people.

School-age adolescents are targets for promiscuity. This happens because at this age teenagers are very vulnerable to all temptations and interventions that come to them. Lack of information from parents and schools, makes teenagers vulnerable to the influence of promiscuity. The introduction must contain (in order) general background, literature review

as the basis for scientific novelty statements from the manuscript, scientific novelty statements, and research problems or hypotheses. At the end of the introduction, the purpose of the study should be written. In the scientific manuscript format, no literature review is allowed as in the research report, but it is realized in the form of a review of the previous literature to show the scientific novelty of the manuscript.

Adolescents in the transitional period are most likely to experience a period of crisis, which is characterized by a tendency to appear deviant behavior. This condition, if supported by an unfavorable environment and unfavorable personality traits, will trigger the emergence of various behavioral deviations and negative actions that violate the rules and norms that exist in society. Ahmadi (2007: 63) states that adolescence is a very decisive period because during childhood, children experience many psychological and physical changes. Psychological changes cause confusion among teenagers so that this period is referred to by westerners as the period of strum und drang. Because they are full of emotional turmoil and mental stress so it is easy to deviate from the rules and social norms that apply among the community.

One of the efforts to prevent and overcome promiscuity is through the role of educational institutions, both formal and informal educational institutions. Educational institutions are places where school-age teenagers spend time studying. Educational institutions can do this in several ways. These methods are divided into four types, namely: increasing Social Skills, optimizing the function of teachers/teachers, introducing legal issues, and fulfilling the curiosity of teenagers. One of the Basic Competencies in Physical and Health subjects taught in Grade VIII Junior High School is analyzing the dangers of promiscuity. Teach children to understand about the dangers of promiscuity is not an easy thing for a teacher/facilitator to do. In teaching the material, the teacher/facilitator need the right method or method. Therefore, appropriate learning media are needed and help in the learning process. As Munahdi (2013: 99) argues that the media in teaching has an important role as a tool to create an effective teaching and learning process.

In the modern era, media has been developed to facilitate learning with multimedia, the nature of the learning will turn into an active class. In line with that, multimedia is an effective tool in the teaching and learning process. The ordinary class will turn into an interactive class, where students can explore, gain knowledge, and even take exams in a fun atmosphere. Learning media, according to Kemp (1985) can fulfill three main functions if the media is used for individuals, groups, and large groups of listeners, namely: (1) motivating interest or action, (2) presenting information, and (3) giving instructions. To fulfill the function of motivating the media, it can be realized by various techniques.

Philip (1996) defines interactive multimedia as a learning program that includes various sources that integrate various media elements in computer programs. The program is intentionally designed in parts and structured to provide opportunities for interactivity between developers and users flexibly, so that the learning process occurs. In general, interactive multimedia applications in learning can be grouped based on their function, namely (a) to train skills (skillbuilder), (b) to explore knowledge (knowledge explorer), and (c) to enrich the learning process (referenceworks).

Based on the results of observations and interviews with teachers in the field of Physical Education and myself as a teacher at SMPN 10 Langsa, the use of learning media is still often neglected for various reasons, including: limited time to make teaching preparations, difficulty finding the right media, unavailability of funds, and do not master the existing technology, so that physical education teachers are still found in the learning process using conventional methods by only relying on textbook media, even though the number is

very limited, even though there are many other media that can be used in the learning process.

In conventional learning, physical education teacher usually only deliver teaching materials in class, read the material and students take notes on the material delivered by the teacher or the teacher only provides photocopies of the material to students to be studied at school. This of course will make students bored and less motivated in participating in physical education theory learning in the classroom, so it is not uncommon to find students chatting with their friends, sleepy, or looking for other activities to relieve boredom. Saturation in the learning process will clearly affect student achievement to be less than optimal.

II. Research Methods

This research method is a descriptive quantitative method with the type of research and development (R&D). The development model in this study uses the development model from Borg & Gall. The procedure carried out in this development research includes several stages, namely: 1) Research and information collecting; 2) Planning; 3) Develop preliminary form of product, 4) Preliminary field testing; 5) Operation field testing 6) Operation product revision; 7) Main field testing; 8) Operational product revision; 9) Operational field testing; 10) Final product revision. The number of samples in this study were 30 students, the research location was carried out at SMPN 10 Langsa Regarding the Hazards of Free Association. Data analysis techniques are carried out in conducting data analysis after all data is collected. Data analysis techniques used in the study using qualitative analysis and quantitative analysis include:

Data collection techniques were used to collect data according to research procedures in order to obtain the required data.Data collection techniques are the most strategic steps in research, because the main purpose of research is to collect data. The technique of collecting data in this research is through needs analysis, expert assessment instruments, and responses from test subjects. The following can explain the data collection techniques in this study, namely as follows:

Needs analysis in this study is a method to guide and be used as a guide in developing interactive multimedia that is made. Needs analysis is applied using yes and no questionnaires to clarify needs in solving problems in the field.

Assessment Instruments are the following:
a. Learning Material Expert
   The assessment instrument for Learning Material Experts is to provide an assessment of interactive multimedia products based on scientific studies in the material on the dangers of promiscuity.
b. Media and Learning Design Expert
   The media and learning design expert assessment instrument is to provide an assessment and feasibility of the application of interactive multimedia products on the implementation and feasibility of the application to students so that it is easy to understand and understand.

Learning Experts, namely giving statements by filling out questionnaire sheets about statements about interactive multimedia products after being carried out to students at the trial stage.Student's response is to give a statement by filling out a questionnaire about a statement about interactive multimedia products after it is done to students at the trial stage.

2.1 Qualitative Descriptive Data Analysis Techniques

Miles and Huberman (in Sugiyono, 2013:337) activities in qualitative data analysis are carried out interactively and take place continuously until complete so that the data is saturated which includes several stages, including:

a. Data collection stage

The data obtained in the study were in the form of case notes on BK and PJOK teachers and researchers when observing problems that occurred at the research site. In this study, the data was taken by researchers, namely assessment data from interviews with PJOK and BK teachers.

b. Data reduction

The data obtained from BK and PJOK teachers is quite a lot, for that it needs to be recorded carefully and in detail. Reducing data means summarizing, choosing the main things, focusing on the things that are important to look for and discarding the unnecessary.

c. Data Presentation

The presentation of the data is done in the form of a brief description to provide an overview in the form of a descriptive description. This makes it easier to understand what happened, then based on what has been understood so that the results are effective.

d. Conclusion

At this stage the researcher draws conclusions from the data obtained. This conclusion is the answer to the formulation of the problem studied in this study. From the four stages of collecting research data, it was found that there were problems in learning the dangers of promiscuity. Therefore, there is a need for the development of interactive multimedia based on Adobe Flash CS6 at SMPN 10 Langsa.

2.2 Quantitative Data Analysis Techniques

Quantitative data analysis was used to analyze the data collected from the questionnaire consisting of a material expert validation questionnaire, learning media expert, teacher and student questionnaire containing the feasibility of the developed adobe flash CS6-based interactive multimedia. The instrument used is a Likert scale questionnaire which consists of 4 categories, namely as follows:

Table 1. Likert Scale Guidelines

No.	Alternative Answer	Score
1	Strongly agree	4
2	Agree	3
3	Disagree	2
4	Disagree	1

Source: Sugiyono (2012: 188)

Data from the questionnaire will be analyzed to get an idea of the learning media developed. After the questionnaire is collected, the percentage of each question item in the questionnaire will be calculated using the formula.

Then the data were analyzed descriptively quantitatively, namely calculating the percentage of indicators for each category in the student needs questionnaire x 100%

Percentage Score

Based on the results of the calculation of the formula above, the number of students' needs is produced in the form of percent.

III. Results and Discussion

This development research aims to produce learning media based on Adobe Flash CS6 that is fun and interesting. The resulting media is media that can be operated via laptops and smart devices. Utilizing technological developments as a teaching tool. The basic concept of media is easy to operate and attractive to teachers and students later. Especially in teaching the dangers of promiscuity to class VIII students of SMPN 10 Langsa. The developed learning media was declared feasible to use based on the results of validation from experts such as learning media experts, material expert validation, teachers, product trial results and the results of respondents' responses. From the results of the analysis of student needs that has been carried out on 30 students.

The results of the analysis of the needs for learning media obtained can be described as the total number of answers obtained at 309 points and the maximum number of answers is 360 points. Based on the data above, the percentage of the need for learning media is obtained by 85.8%. From the percentage of needs obtained from the needs analysis, the level of need for the development of learning media has a high level of need.

The results of the needs analysis obtained from teachers as many as 80% of teachers experienced problems when teaching material about the impact of promiscuity and visualizing the impact of promiscuity to children in the classroom. And as many as 100% of the teachers do not develop teaching materials, and make teaching materials and require learning media that can teach the impact of promiscuity to class VIII students of SMPN 10 Langsa. With regard to the dangers of promiscuity, the researchers conducted research by watching educational videos on YouTube, with the aim of knowing what content was conveyed.

Initial product validation regarding interactive multimedia based on Adobe Flash CS6, with material on the impact of the dangers of promiscuity. The results of the validation in phase I are a guide for researchers to develop the quality of the material to be developed in the product in the form of interactive multimedia based on Adobe Flash CS6. The results of expert validation were analyzed through the assessment given by the expert and then made improvements and then validated the repairs that were less precise in the material contained in the media.

Things that are still lacking in the material in the product can be described below based on the results of validation I from a material expert. On the indicators regarding the quality of the improvement material that must be done on the product, namely regarding the suitability of learning with indicators, the suitability of learning with the questions made, and the ease of instructions for working on practice questions. Then based on indicators regarding the quality of the content of the learning material, namely on the aspect of material skills, achievement indicators, and examples according to the material. All of these things became major improvements because they obtained the "Enough" criteria with a presentation of 50%. The first validation of the results of the assessment of learning media experts obtained an average of 63.8% with sufficient criteria. In the acquisition of display indicators, the presentation results are 63.6% with sufficient criteria, while the programming assessment indicators get a value of 63.9% with sufficient criteria.

In the assessment of the display indicators, the results were lacking in aspects of questions regarding the selection of the size of the text of the material, the harmony of the color composition, the selection of the background, the attractiveness of the video presentation, and the clarity of the sound. While the programming indicators for the acquisition of results that fall into the criteria are lacking in the aspects of the question of presenting material on the media clearly and easily understood, ease of use, the application of

learning media is able to present all components clearly. And learning media is more practical to use. This aspect of the question obtained a result of 50% which was included in the less criteria.
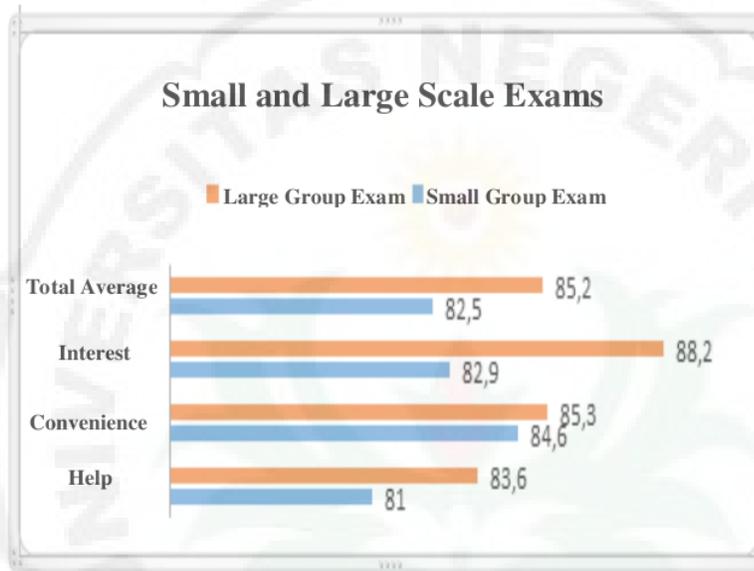
in this second stage of 92.50% with very good criteria. In the sub-indicator on the quality of learning materials, the average result is 97.2% with very good criteria. And the indicators regarding the content of learning materials obtained an average result of 88.6% with very good criteria. Learning media experts in stage II obtained an overall average of 91.3 with very good criteria. In the aspect of display indicators, the results obtained 90.9% with very good criteria and in the programming aspect, the results obtained 91.3% with very good criteria.
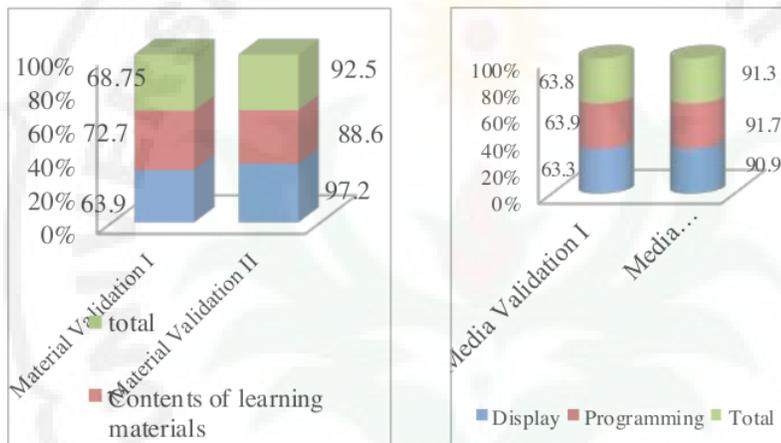
In the initial field conducted with 5 teachers of SMPN 10 Langsa, the overall results obtained an average of 73% with enough criteria. There are three indicators that become aspects of the assessment, namely helpfulness, convenience, and interest. In the aspect of assistance assessment, the results obtained are 72 with sufficient criteria. In stage II it can be described that the overall average results obtained are 85% with very good criteria. In the aspect of the helpfulness indicator, an average of 83.3% was obtained with very good criteria, on the ease indicator the results obtained 86% with very good criteria and in the interest aspect the results were 85% with very good criteria, it can be seen in the following diagram.
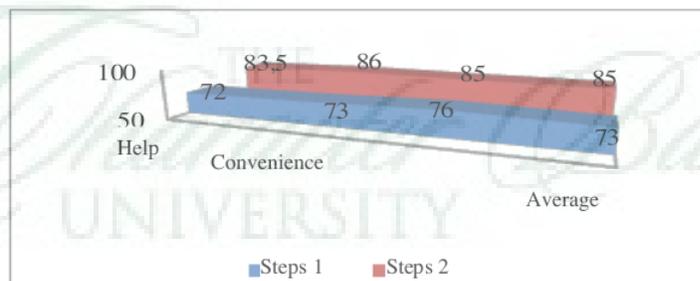
In the small-scale test as many as 12 students, the results were 82.5% with good criteria, after that it was continued with large-scale testing with the number of students as many as 30 students, the test results were 85.2% with very good criteria. The test results in stages I and II regarding the feasibility of the developed product can be seen in the following diagram.

Small and Large Scale Exams

■ Large Group Exam ■ Small Group Exam

	Large Group Exam	Small Group Exam
Total Average	85,2	82,5
Interest	88,2	82,9
Convenience	85,3	84,6
Help	83,6	81

The description of the data can be triangulated based on the data obtained from observations, analysis of the needs of teachers and students, then the tests of experts and teachers in stage I and then compared to the tests of experts in stage II, it can be concluded. The results of each test, researchers can draw a conclusion if the product developed in the form of interactive multimedia based on Adobe Flash CS6 in the eyes of the dangers of promiscuity is suitable for use in learning at SMPN 10 Langsa.

IV. Conclusion

This research develops and produces learning media in the form of interactive multimedia based on Adobe Flash CS6 on the subject of the dangers of promiscuity. The media produced and developed can serve to assist the performance of teachers in the process of implementing teaching and learning in accordance with the development of science and technology. The feasibility of interactive multimedia products based on Adobe Flash CS6 in terms of the dangers of promiscuity is known based on the validation of the feasibility of the two stages, namely material experts and media experts (IT), teachers and product trial subjects providing an assessment with the percentage criteria of "Very Eligible". In product assessment during small group field trials and limited field group field trials, it is included in the "Very Good" assessment percentage criteria. Overall, the product quality assessment of the computer-based exam application system is included in the "Eligible" assessment percentage criteria to be used.

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