

Development of Android-based Graphic Design Learning Media as a Source of Learning

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ABSTRACT

Learning is one of the most important things in life, which cannot be forgotten, which is in line with current technological developments that are very influential in education. With the Covid-19 condition, it is very necessary for the function of technology to support the learning process. From these problems, the researchers provided a solution, namely utilizing Smart Apps Creator to create interactive learning media. Through this application, it can help and increase student motivation in studying graphic design subjects. The study also took problem research at Pulubala State Vocational High School 1 with research points that were tried on students of class XI vocational Multimedia, especially Graphic Design subjects. In this study, researchers used the Research and Development (R&D) method. This research produces an Android-based interactive learning media with basic material for graphic design through the smart apps creator application. Based on the results of the media expert assessment, the percentage of media eligibility for learning media developed in the Technical Quality aspect is 85.9% (adequate), the Interface Design aspect is 89.4% (very feasible) and the content aspect is 85.0% (worthy). Total score 220 with category (decent).

Keywords: *Design, Instructional Media, Graphic Design, Smart Apps Creator.*

1. INTRODUCTION

Every time, technology continues to develop rapidly as if without limits, with the development of technology, it must have a very big impact on everyday life, whether it is positive or negative. However, this technology really helps us communicate with family, relatives, friends or girlfriends who are in distant places. Currently all humans are dependent on technology whether in the world of work or education. Communication is something that exchanges information between two or more people. With communication one can understand the intentions of others whether it is important or not important. If the communication process goes well, closeness will be established between a person and another person. Every human being must have the ability to communicate because with this ability we will easily blend in with the people around us or even more broadly.

Media in learning functions for the purpose of instruction where the information contained in the media must involve students both in mind or mentally as well as in the form of real activities so that learning can occur. Besides being fun, learning media must be able to provide a pleasant experience and meet the needs of students, especially during the current conditions which

are being hit by the Covid-19 pandemic, the presence of technology is really felt in the learning process. Because, in the current conditions it is not possible to carry out face-to-face learning, learning through online is the main choice by utilizing existing technology.

Learning media is a tool in the form of objects or non-objects and becomes a tool for educators in conveying material to students so that it can be understood more efficiently and smoothly. Learning media is very much needed in the world of education especially supported by sophisticated technology, of course this can increase the value of the quality of education in schools.

The integration of interactive graphic learning materials on agricultural processing technology via Android platforms significantly improved student interaction and understanding [2]. Designing Android-based learning resources for Social Studies subjects significantly improved student engagement and knowledge retention [7].

The utilization of Smart Apps Creator in developing Android-based graphic design learning media proved effective in enhancing student engagement and comprehension.[1]. Smart Apps Creator includes

applications that are very easy to operate in terms of creating Android-based applications without using programming code and html5 and exe output. The reason for using this application is because it is easy to obtain and the output results do not use the internet so that in any circumstances and anywhere it can be used especially for students who have difficulty getting network access.

2. RESEARCH METHODS

The research method used in this study is to use the Research and Development (R&D) method which aims to produce or develop a new product.

The research method is a scientific way of obtaining some data from a particular phenomenon. Scientific means that the research carried out has a basis from existing knowledge which is rational, systematic and empirical. The purpose of rational is that the research carried out can be accepted by human common sense. Empirical is something that can be seen or felt by the human senses in general, so that people can clearly see and observe the research we are doing. Systematic, is a process in research in the form of steps which make sense.

Sugiyono said the research method is a scientific way of obtaining some important data but must be able to describe, prove, develop and discover knowledge, theory, in understanding, solving, and anticipating problems in human life [13].

The steps in the research on the creation and development of interactive learning media are as follows:

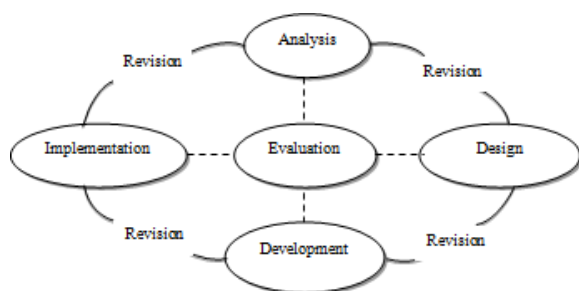


Figure 1 ADDIE's Approach to Develop Products in the Form of Learning Designs

3. RESULTS AND DISCUSSION

Research and development has been carried out at SMK Negeri 1 Pulubala. In this study produce interactive learning media using Smart Apps Creator with applications supporting Adobe Photoshop CS6. This learning media will be given to students during online learning in the form of an apk file to be installed on each student's cellphone and can be used offline or self-study. This development and research uses the Research and Development (R&D) method and uses the ADDIE Development Model (Analysis, Design, Development,

Implementation, Evaluation). The steps that have been carried out are as follows:

3.1. Analysis

At this stage an analysis of the state of the field was carried out by gathering information about the learning process at SMK Negeri 1 Pulubala in class XI Multimedia. Then analyze the Competency Standards and Basic Competency on Basic Graphic Design material. Based on the results of the analysis activities that have been carried out, an Android-Based Learning Media is developed that uses the main software, namely Smart Apps Creator and Adobe Photoshop CS6 supporting software. Furthermore, the collection of reference material from the syllabus for Graphic Design subjects and also books related to Graphic Design needed in the development of learning media.

3.2. Design

The process carried out at the design or design stage is making media designs (Storyboards), selecting materials, preparing materials, questions and discussions and making modules.

3.3. Development

At this stage it refers to the storyboard that was made before. The main software used to create learning media is Smart Apps Creator which is used for making Android applications and Adobe Photoshop CS6 supporting software for editing images and buttons. The beginning of the creation is to design the appearance of each Section according to your needs by assembling all the material, images, videos, buttons into an Android-Based Learning Media. The results of learning media with the basic material of graphic design are as follows:

3.3.1. Intro Page View

The intro view is the first page that appears when the application is opened and has the application loading. The page display is as follows:



Figure 2 Intro Page.

3.3.2. Application Introduction Page

Headings may be numbered or unnumbered This page appears when the application loading process is complete, on this page it contains an introduction to the application before entering on the main page, the appearance of the application introduction page is as follows:



Figure 3 Application Introduction Page.

3.3.3. Start Application Page

In the start page view, it has the title of the material in the application and has a start button to continue displaying the application, the application start page display is as follows:



Figure 4 Start Application Page.

3.3.4. Application Main Page

The main page is a page that has a menu of materials, learning objectives, application profiles and Quiz at the end, here is the main view of the application as follows:



Figure 5 Application Main Page.

3.3.5. Learning Objectives Page

Before entering the learning material, we will be shown the learning objectives in the application first, the display of learning objectives is as follows:



Figure 6 Learning Objective Page.

3.3.6. Application Profile Page

The main page is a page that has a menu of materials, learning objectives, application profiles and Quiz at the end, here is the main view of the application as follows:



Figure 7 Application Profile Page.

3.3.7. Material Definition of Graphic Design Page

This page contains material for understanding graphic design. Display the understanding of graphic design pages as follows:



Figure 8 Material Definition of Graphic Design Page.

3.3.8. Graphic Design Software Material Page

This page contains material about the types of graphic design along with the basic video tutorials for the software. The graphic design software material page displays as follows:



Figure 9 Graphic Design Software Material Page.

3.3.9. Quiz Start Page

Before starting to answer we will be met with the start quiz display to start the quiz, the start quiz display is as follows:



Figure 10 Quiz Start Page.

3.3.10. Quiz Page

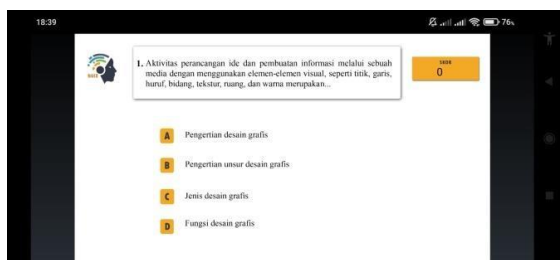


Figure 11 Quiz Page.

3.3.11. Score Research Page



Figure 12 Score Research Page.

3.4. Publishing

Publishing is the stage for exporting the design results into an Apk file if the application is running properly. Publishing is very important because by publishing the

applications that we make can be installed by students on their respective smartphones to be operated.

3.5. Learning Media Validation

The results of the learning media will be validated by 3 people, consisting of 2 media experts and 1 material expert. The results of the validation are in the form of an assessment of the learning media contained in the questionnaire provided by the researcher. The results of media testing can run well, this can be seen from the results of the media expert validator questionnaire. Where the results of the assessment of the media obtained a total score of 220 with a percentage of "85".

4. CONCLUSION

Based on the development of Android-Based Learning Media as student learning media in class, it can be concluded as follows:

The design of this learning media uses the Research and Development (R & D) method using the ADDIE model or approach which consists of several stages, namely: (1) Analysis, (2) Design, (3) Development, (4) Implementation, (5) Evaluation.

The feasibility level of Android-based Learning Media in Computer and Basic Network Subjects is included in the "Decent" category with a media feasibility percentage of 85% from media experts, a material eligibility percentage of 100% from material experts in the "Very Eligible" category and the percentage of student responses 90% in the "Very Eligible" category.

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