ANALYSIS AND DESIGN OF ANDROID-BASED LEARNING MEDIA ON THE SUBJECTS OF THE FINE ARTS 3D

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Abstract

This is study aims to develop based learning media on the subjects of 3D Media arts. The research development with stages of designing, production, evaluation, and analyzing data by percentage. Based on different stage the trial was being done to experts : media experts (81,92), the design (81,7), and the matter (80). So the percentage of overall value on the validation experts have eligibility criteria good. To sacle individuals (88,7), small group (80,23) and held test (81,23). So the total value of average percentage on of respondens with criteria good.

Keywords – Android, Learning Media, Development, 3D Media Art

Introduction

Education can be said as a process in the effort to form intelligent and skilled people, realize quality and creative human resources and be able to compete in facing the challenges and advances of science and technology.

In education there are learning activities that are deliberately carried out to seek knowledge, skills, and socio-cultural values. Learning is a process of effort by a person to obtain a new change in behavior as a whole as a result of his own understanding in interaction with his environment.

The development of information and communication technology today, making the learning process can be done anywhere and anytime such as android-based learning [1]. With the existence of learning media can increase student learning

motivation and the possibility of students can learn alone with abilities anywhere and anytime [2].

However, the use of these technological advances has not been seen in learning. Based on the phenomenon that occurs when learning in the classroom is a process of defense carried out by teachers using only presentation media in the form of power points that contain text only without images and videos. In addition, teachers and students already have android-based mobile phones but have not been used to support the learning process.

Based on the above exposure, there needs to be an android-based learning media in 3D Fine Arts subjects. The learning media can be used as a learning medium for learners both in school and in school, and can be used by educators as a learning medium in the teaching and learning process. In addition, with this application, students are also directed to better utilize the smartphone they have not only to communicate but also for the realm of education.

Methodology

The methodology used in this research is development research. It is research oriented to develop and validate the products used in education[3]. The development of this android-based learning media uses a procedural model that is descriptive, showing the steps that must be followed to produce the product [4]. The steps of development procedures include: design, production, and evaluation stages [5].

The subjects in this study are in the early *stages* of validation by experts (design experts, media, and materials). Then continued individual-scale product trials, small group trials and field tests. The data collection technique in this study uses questionnaires. Questionnaires are used to obtain information and data to measure the feasibility of the resulting product.

Finding and Discussion

In accordance with the development steps that have been selected, the following design, production and evaluation are produced:

a) Design stage: obtained the results of the analysis of needs in the form of materials and syllabus subjects in accordance with the curriculum. Continued with the preparation of the script.

b) Stage of production: media developed in the form of audiovisual media that is the incorporation of text, sound, images and animation.

c) Evaluation stage: premaster evaluation consisting of evaluation of experts, individuals, and small groups. Followed by field trials.

The final result in this study is an android-based learning medium that is used as a learning medium. The application consists of interconnected pages, as for the following display:

Figure 1. Main View

Figure 1 is a page that contains buttons that serve to make it easier for users to run and access the view they want to open. The buttons on the gamabar above are competence, material, evaluation and profile.

Figure 2. Competency View

Figure 2 is a competency page containing information about core competencies, basic competencies created. The

content of the core competencies and basic competencies in the program is adapted to the 3-dimensional art learning syllabus.

Figure 3. Material Menu View

Figure 3 displays the material menu. This page is a sub menu of the main page. In this material page there is a menu to connect to the material in the form of theory.

Figure 4. Evaluation view

Figure 4 is an evaluation page containing the questions used to train and measure students' abilities. The problem presented on this menu is a multiple choice.

In accordance with the stages that have been done in the creation of learning media in the form of android-based learning media. It is said that this learning medium was developed in accordance with the curriculum of the student eye of 3-dimensional art class XI.

This android-based learning media has gone through a premaster evaluation stage that begins with experts. For validation or assessment to the design expert is as follows

Table 1. Assessment results by design experts

Indicators	Value
1st	88
2nd	78
3rd	80
4th	79
5th	85
6th	78
7th	89
8th	77
9Th	84
10Th	79
Total Answer Value	817
Number of Question Indicators	10
Average	81,7

Based on the table above, the average design expert assessment result is 81.7. Based on the feasibility scale table, the value is 81.7 bearada at intervals of 75%-89% with the category "Good".

Table 2. Assessments by media experts

Indicators	Value
1st	88
2nd	79
3rd	77
4th	85
5th	82
6th	78
7th	79
8th	82
9Th	87
10Th	85
11th	80
12th	78
13th	85
Total Answer Value	1065
Number of Question Indicators	13
Average	81,92

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Based on the table above, the average design expert assessment result is 81.92. Based on the feasibility scale table, the value is 81.92 bearada at intervals of 75%-89% with the category "Good".

Table 3. Results of assessment by material experts

Indicators	Value
1st	83
2nd	78
3rd	80
4th	82
5th	78
6th	82
7th	79
8th	82
9Th	78
10Th	80
11th	78
Total Answer Value	880
Number of Question Indicators	11
Average	80

Based on the table above, the average design expert assessment results are 80. Based on the feasibility scale table, the value of 80 bearada at intervals of 75%-89% with the category "Good".

Table 4. Scale assessment results (3 students)

Indicators	Value
1st	85
2nd	84
3rd	78
4th	80
5th	79
6th	77
7th	78
8th	80
9Th	78
Total Answer Value	799
Number of Question Indicators	9
Average	88.7

Based on the table above, the average design expert assessment result is 88.7. Based on the feasibility scale table, the value is 88.7 bearada at intervals of 75%-89% with the category "Good".

Table 5. Small-scale assessment results (8 students)

Indicators	Value
1st	78
2nd	79
3rd	80

4th	78
5th	82
6th	85
7th	80
8th	78
9Th	79
10Th	78
11th	80
12th	81
13th	85
Total Answer Value	1043
Number of Question Indicators	13
Average	80,23

Based on the table above, the average design expert assessment result is 80.23. Based on the feasibility scale table, the value is 80.23 bearada at intervals of 75%-100% with the category "Excellent".

Table 6. Field-scale assessment results (26 students)

Indicators	Value
1st	79
2nd	78
3rd	79
4th	80
5th	82
6th	85
7th	79
8th	78
9Th	80
10Th	82
11th	84
12th	85
13th	85
Total Answer Value	1056
Number of Question Indicators	13
Average	81.23

Based on the table above, the average design expert assessment result is 81.23. Based on the feasibility scale table, the value is 81.23 bearada at intervals of 75%-100% with the category "Good Sanagat".

Conclusions

Based on the results of research and discussion about the development of android-based learning media, namely through several stages, namely expert trial stages and trial stages to the field. The results of premester evaluations conducted by media experts obtained 81.92 with good predicates, design expert

evaluations obtained a percentage of 81.7 with good predicates, and material experts rated products made with a percentage of 80 good predicates. So the overall percentage average value on expert validation obtains good eligibility criteria.

After the feasibility test of experts then continued with individual trials obtained an average percentageof8.7 with excellent predicates, small-scale trials obtained an average percentage of 80.23 with very good predicates, and large-scale trials obtained an average percentage of 81.23 with very predicates. good. So overall the percentage average score in respondents obtained excellent eligibility criteria..

Based on the results of several stages of trials conducted by experts and respondents it can be concluded that this *android-based* learning medium is feasible to apply in 3-dimensional fine art learning in class XI.

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