Android Learning System Development for Students Family Welfare Department Entrepreneurship Education Course

Novia Restu Windayani[1*], Maspiyah[2], Trisnani Widowati[3], Ronggo Alit[4], Nur Ilahi Anjani[5]

{noviawindayani@unesa.ac.id[1], maspiyah@unesa.ac.id[2], ronggoalit@unesa.ac.id[3] }

Universitas Negeri Surabaya, Surabaya, Indonesia

Abstract: Entrepreneurship is one of the topics in the lecture materials that has material in general, so there is a need for the specification of entrepreneurship lecture materials related to the field of tourism. Meanwhile, the entrepreneurship material requires students to always be creative, be able to think critically, and have high creativity to establish a business in accordance with their study program. Research objectives Producing android-based learning media that is intended to increase the creativity of students of the Department of Family Welfare Education and Test the effectiveness of android-based learning media to increase student creativity in the Department of Family Welfare Education. The Research and Development (R &D) method was applied in this study to produce an Android-Based Learning Media product. The development of android-based learning media using tests consisting of cognitive (knowledge), affective (attitude), and psychomotor (skills) tests using performance instruments in the form of tests and practical tests to find out student creativity has a percentage of: (1) validity level of 81.67%, (2) feasibility level of 3.56 (validity), and (3) reliability level of 0.364. In conducting research, the number of students was also considered. 10 face-to-face research children were declared creative 8 children, and during the online implementation with 20 children were declared creative 17 children, then the 3 children were less creative.

Keywords: Android-Based Learning Media, Entrepreneurship Courses

1 Introduction

Learning is getting more creative for every lecturer with increasingly rapid technological advances in the educational era. Learning activities in schools today emphasize process skills and active learning, and [1] learning media are becoming increasingly important in the learning process. E-module is a display of information packaged in a book format that is presented electronically using a hard disk, floppy disk, CD, or pen drive and can be read using an electronic book reader or a computer [2]. According to Surachman, the low creativity ability of students is caused by the approach of conventional learning methods, which are considered less able to attract students to learning [3]. In this study, a problem formulation How is the validity of Android Learning Media as a Learning Resource for Entrepreneurship in the Department of Family Welfare Education at Surabaya State University? What are the results of using Android Learning Media as an entrepreneurial learning resource in the Department of Family Welfare Education at Surabaya State University?

The purpose of the study is to find out the validity of Android Learning Media as a Learning Resource for Entrepreneurship in the Department of Family Welfare Education at Surabaya State University. The use of Android learning media as a learning resource used in

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this study was developed using Sigil software version 0.9.10.0. Sigil is one of the android-based applications that can be used in the learning process by students [4]. Sigil's features include open source, multi-platform, running tests and prototype results that are lightweight and easy to operate, user-friendly, or easy to operate on all types of electronic module readers. The material produced by this e-module is not just written but also equipped with images and videos. This is because important aspects in the development of digital learning include the content, validity, usability, and functions provided [5].

The learning process carried out to make it easier for students to understand a material that has been given with the feasibility of the E-module, in accordance with Nita Sunarya's research [6], entitled The Feasibility of Interactive Modules (E-Modules) in Chemistry Subjects for Class XI SMA, concluded by showing that interactive electronic modules (E-modules) for Class XI high school science according to material experts and media experts are in the category of feasible. The application and use of e-modules in general can be carried out under the category of "worthwhile" and receive a positive response from students [7].

Regarding learning media, several researchers have developed e-modules as learning media. Liu et al. [8] in their research entitled "Effect of an interactive e-book on nursing students' electrocardiogram-related learning achievement: A quasi-experimental design was designed and developed for an electronic book that focuses on attention motivation, relevance, trust, and satisfaction to evaluate the learning achievement of nursing students when compared to traditional learning materials [9].

According to Vita's research [10] on "Development of ICT-Based Interactive Media on Nail Art Material for Class XI SMK Negeri 8 Surabaya," the subject matter used in this media is nail painting theories (nail art). The research method uses quantitative research, and the development model uses the research and development model of research and development (R&D).

Helna's research results in learning in terms of the Development of Interactive E-Modules as a Learning Resource for Basic Electronics Class X SMKN 3 Magelang, in terms of research focusing on this research aims to determine the quality of feasibility and performance of interactive E-modules as a learning resource for Basic Electronics [11]. Assessment is taken from the components of the material, media, and learning process; performance is assessed from aspects of appearance/layout, coloring, and operation. The assessment was carried out using a questionnaire with four answer choices, where the lowest score was 1 and the highest was 4. The score was then converted into a feasibility category according to what was contained in the data analysis.

2 Research Method

This research is a type of research and development (research and development). "Research and development aims to produce new products through the development process." In general, research and development is research that aims to produce new products and test the effectiveness of these products. observation data collection techniques, documentation, interviews, observations, and filling out questionnaires to determine the feasibility of the nail art e-module. The subjects in this study were students in the family welfare education department who had Android smartphones. This research and development aims to develop and validate good educational products in the form of e-modules on nail art materials. According to Sugiyono [11] stated that needs analysis and to test the effectiveness of these products so that they function in the community, research and development research methods are used. Below is the development procedure:

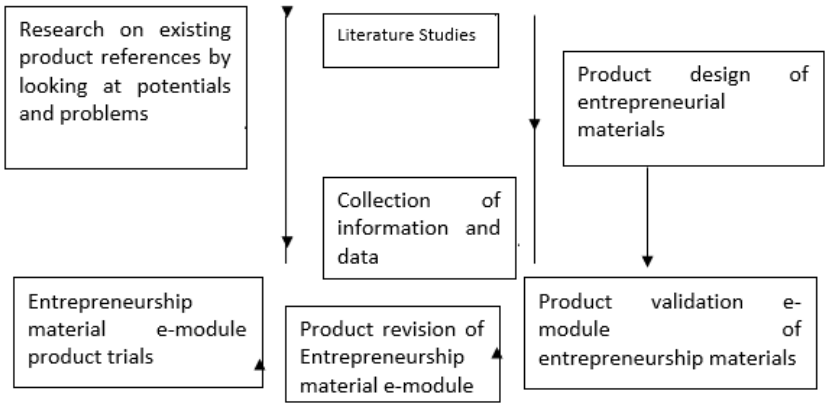

Figure 1. Research Steps R&D Development of Android Learning Media Entrepreneurship

2.1 Potentials and Problems

Potential is everything that has the ability or capacity to be developed so that it has added value, while a problem is a deviation between what happens and what is expected and an area that concerns the researcher, a condition that wants to be improved [11]. The problem underlying the development of this e-module is that in the provision of entrepreneurship material, which is still conventional and limited, there is only one manual belonging to the teacher. There are no learning resources that utilize technology that can be used in an independent learning system. So there is a need for the development of android-based learning media to support learning.

2.2 Literature Study and Information Collection

Literature studies are also carried out by collecting journals and books related to entrepreneurial material, while information collection is carried out through field studies for empirical data and is used for development needs. For empirical data through field studies, it is carried out by interviewing the head of the department in the field of beauty and making observations in the field. The results of the interview at the initial stage revealed that there was no guideline for student learning resources for entrepreneurship material in the form of e-modules. The collected data is used as the basis for the preparation of the entrepreneurship e-module development design.

2.3 Entrepreneurship Product Design

The next stage of this research is to design the product. The product referred to here is the development of an e-module on entrepreneurship material for students majoring in Family Welfare Education. After the design and development of the entrepreneurship e-module are formed, the next step is the collection of learning tools to be developed, referring to the entrepreneurship material and the design of validation instruments in the form of components to be assessed. The development of e-modules is also equipped with RPS and entrepreneurial materials. The product produced in this stage is the development of an e-module in the entrepreneurship course at the Department of Family Welfare Education, Surabaya State University.

2.4 Validation of Android Learning Media Product Development

Validation is carried out by media experts and teachers in the field of beauty. Each expert is asked to assess the design that has been made to find out the weaknesses and shortcomings of the product design that has been made. The instrument used is the validity of the product design. The method used in product validation is quantifiable, and the instrument used is filled in by experts. Furthermore, the results of the expert assessment score are analyzed quantitatively according to the formula used and critiqued according to the validity standards that have been compiled. The results of the test will be obtained through hypothetical development, namely the development of e-modules for entrepreneurship courses.

2.5 Revision of Android Learning Media Development

Product revisions are carried out through discussions with experts and several experts to find out design weaknesses related to the development of android-based learning media entrepreneurship courses. The weaknesses that occurred were corrected by researchers, who would produce a preliminary product that had been approved by experts. The instruments used are in the form of validation instruments for improved product designs, and the contents of the instruments are adjusted according to the direction of experts. The purpose of product revision is to correct or supplement the shortcomings of the product developed in order to meet the requirements worthy of field trial and error, even if it is only on a limited scale.

2.6 Limited Trial

Limited trials are carried out to test the effectiveness of the product being developed so that the final product is obtained. The trial was only conducted on a limited scale, with a small group of 25 students and a large group test with the Department of Family Welfare Investigations totaling 160. Trial design is pre-experimental design. Experimental model. The results of the limited trials showed the effectiveness of the development of the e-module. If there are still some flaws found in the development of the nail art e-module, revisions are made again to obtain the final product. Product revisions need to be carried out on several grounds, the first of which is that trials are still carried out on a limited scale so that they do not reflect the actual conditions. Secondly, in the trials, weaknesses and shortcomings were still found. Third, the use of the product or the targeted product can be a source of data to revise the product. The result of this stage is the final product, i.e., a valid and effective product. The physical product form is an android-based learning medium.

3 Results and Discussion

This research resulted in a sigil E-module product given to students that can be used to study in the classroom or learn independently to increase student creativity. This development and research use the Research and Development (R&D) method. Based on the validity results of the development of learning models, it can be implemented in the field. The effectiveness of the module is measured by the final results of students who are used as a benchmark for this learning model, which emphasizes aspects of cognitive, affective, and psychomotor sciences. The effectiveness of this study is seen from the perspective of individuals, namely students. The results of the assessment of learners are used as a measure of the effectiveness of the development of learning models.

3.1 E-Module Validity Test

A research product will be more thoroughly tested for validity when it has been tested for validity so that the research can be objective. One of the validity tests that can be used to test research products is in the form of android-based learning media in entrepreneurship courses in expert validation, which aims to obtain input on the improvement of the e-module. The expert validator consists of four experts: two media experts, one vocational school teacher in the field of beauty management, and one educational technology expert. The results of the validation of the Kewirausahaan e-module by media experts have been analyzed as follows:

Table 1 Expert Validation Results of Entrepreneurial Android Learning Media

No	Aspects	V1	V2	V3	V4	Average	Criteria
1	Content feasibility aspect	3,7	3,2	3,9	3,5	3,5	Valid
2	Language Aspect	3,4	3,1	3,7	3,2	3,3	Valid
3	Design Aspect	3,7	3,9	3,5	3,1	3,5	Valid
4	Aspects of Ease of Operation	3,4	3,6	3,4	3,8	3,5	Valid
	Overall average					3,4	Valid

3.2 Reliability Test

Table 2 Symmetric Measures Reliability Test Results

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Measure of Agreement	Kappa	.364	.175	2.269	.023
N of Valid Cases		35			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					

Based on the test, a value of 0.364 can be obtained, so that it can be stated that the rater agrees in assessing the fair category. Approx. sig scored 0.023 with a significant rate of 5%, then Ho was rejected and there was no agreement between expert 1 and expert 2, while Ha was accepted in the case of agreement between the two experts.

3.3 Limited Trial

The trial of the limited-scale model was carried out after the nail art e-module and the device had been expertly validated and repairs were made so that the nail art e-module was completely ready for field trials. The nail art e-module trial is carried out in several stages. The first is explaining the purpose of learning using this nail art e-module with Android, so that students start by compiling subtitles and epub links (nail art e-modules) that can only appear on each student's Android cellphone. Then, in the second stage, students do their learning independently with an Android cellphone, and they are asked to fill out a questionnaire about the nail art e-module as an assessment of the e-module, as follows:

Table 3 Data on Limited Test Results for Nail Art E-Modules

Students	Aspect	Evaluation	Criteria
160	Content eligibility	3,48	Good
	Language Eligibility	3,40	
	Benefit Eligibility	3,49	
	Graphic Eligibility	3,53	
Average		3,47	Good

3.4 Discussion

This study aims to produce e-module learning media to test the validity and effectiveness of Android learning models in increasing student creativity. E-module learning media uses observation strategies first in the learning process. The development model is carried out in the form of learning models, guidebooks, and evaluation instruments. Model validation is carried out with an assessment by an expert or experts who have criteria as a model validator. The revised validation results are then tested in a limited-scale field to determine the effectiveness of the model.

Learning media e-module entrepreneurship subject matter is something to develop by raising learning Learning media is one of the things that will make it easier for students to learn, and terratric. This is relevant research with the Department which states that the existence of a training is one of the models in promotional techniques for the field of professional order. Research from inas that there are pre-test and post-test when conducting research to find out about comfort and interest for students

The learning process using android-based learning media is more effective in learning nail art material, in accordance with Imansari research, that in this case So that students are expected to be able to improve learning outcomes and help learn history and students are expected to reach a high level by using literacy after using E-book learning media through the Sigil application in learning history. The type of research used is development research with a 4D model. This is in accordance with research using Android learning media to facilitate the learning process, one of which is by using sigils.

The feasibility of sigil media is in accordance with the opinions of students with instruments that have been cited by students, that in the learning process it is more interesting and efficient because it makes it easier for students to learn with conditional time, in accordance with Darma's research, states that The development of e-modules uses a type of 4-D development research which consists of the initial investigation stage, the prototype making stage, and the assessment stage. The subjects of the research were three chemistry lecturers at Padang State University, two chemistry subject teachers, and sixteen grade 11 students at SMA Negeri 1 Airpura.

The research was conducted in the environment of SMA Negeri 1 Airpura in April 2021. The assessment instruments used were a validity questionnaire and a practicality questionnaire. The data from the validity and practicality questionnaires were processed using data analysis techniques according to the Kappa moment formula. The e-module validity value was obtained at 0.86, and the e-module practicality value was 0.89. Thus, it can be concluded that the e-module being developed has very high validity and practicality.

4 Conclusion

1. Android-Based Learning Media is proven to be valid through a media expert validation process with an average of 3.5 and on material experts 3.8 which means that android-based learning media has a good level of validity because of the maximum score of 4.
2. Andorid-Based Learning Media that has been tested on students in the use of the learning process by providing questionnaires as assessing nail art e-modules with an average of 3.4 have good quality to students because they are interesting in their application and easy to learn.

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