

Development of Android Application Based Wrestling Learning Media in Covid-19 Pademic

Tatang Iskandar¹, Margono²

¹. Lecturer at Department of Physical Education, Faculty of Teacher Training and Education, Islamic 45 University Bekasi. Cut Mutia Street No. 83 Bekasi West Java, Indonesia

²head of school for sports special, assistant deputy for the management of training centers and special schools for sports, ministry of youth and sports Indonesia, youth gateway No 3, Senayan, Central Jakarta

Email : tatang@unisma.bekasi.ac.id

Abstract

Wrestling is one of the subjects taught at the Islamic University 45 Bekasi. The impact of the covid-19 pandemic made wrestling learning carried out online. In the modern era where technology is developing rapidly, the use of technology-based teaching materials continues to be developed so that the teaching and learning process is no longer dependent on the same place, paper or blackboard. The method used in this study was Research and Development with ADDIE development model, which refers to Analysis, Design, Development, Implementation, and Evaluation. The result of the development is in the form of wrestling learning material which is presented in an android application.

Keywords: Wrestling Subject, Android Application.

INTRODUCTION

It is suspected that COVID-19 first appeared in Wuhan, Hubei Province, China due to the presence of a food market in Wuhan that sells various types of living and dead animals. The virus has been spreading all over the world, including Indonesia since the beginning of March 2020 (Windhiyana, 2020). Many ways to prevent the spread of covid-19 virus have been done by the government including social distancing policy, physical distancing, banning homecoming, thus learning activities are conducted online.

The impact of the spread of Covid-19 now begins to enter the world of education. Educational institutions are expected not to carry out activities as usual; this is expected to reduce the spread of Covid-19 (Abidah et al., 2020). Based on the direction of the President of the Republic of Indonesia, the Minister of Education made a decision that all learning activities in both schools and universities are conducted online through their homes using supportive applications to conduct learning activities. The Minister of Education issued Circular Letter No.3 of 2020 concerning the Prevention of Corona Virus Disease (covid-19) in the Education Unit stating that it is necessary to dismiss schools and universities (Kemdikbud RI, 2020). Now,

especially in Indonesia, the learning process at school stops altogether (Hambali et al., 2021). Based on a circular letter from the Minister of Education, rector of Universitas Islam 45 Bekasi made a decision that the lecture activities were conducted online using online learning media (online).

In covid-19 pandemic, android learning media becomes one of the right choices because almost all students of physical education, health and recreation of Universitas Islam 45 Bekasi use android phones. Sensor Tower report, in the first quarter of 2020, data consumption for mobile application downloads increased to reach 596 million gigabytes. This number increases by 34 percent when compared to the same period last year (Pertiwi, 2020). Android is an open source operating system that means it is complementary and free to use for app developers. This is very easy for developers of android applications or app developers. Users also get some benefits, because it is easy to obtain or download applications. Through the Play Store, users can download various applications for free or for a fee depending on the developer /maker (Sutiasih & Saputri, 2019). Android is an operating system that contains middleware as well as basic applications (Rolly & Hakiem, 2015). Learning media applications using Android-based smartphones proved feasible, practical, and efficient for use in learning (Lu'mu., 2017).

The purpose of this study is to develop an Android application that can be used as a learning medium wrestling courses for students of Physical Education, Health and Recreation, Universitas Islam 45 Bekasi.

METHODS

Research methods used in study is Research and Development methods. Research and Development method is a research method used to produce a particular product, and test the effectiveness of the product (Sugiyono, 2016). The development procedure refers to the ADDIE development model (Dick and Carey, 1996) which consists of five stages that include Analysis, Design, Development, Implementation, and Evaluation. Analysis stage (material analysis, curriculum analysis, objective analysis, capability level analysis), design stage ((design of material items to be presented, preparation of materials, preparation of material delivery flow in the form of flowchart, and collection of materials needed in media development), development stage (media creation using software Builder App), implementation stage (assessment by media experts, material experts, and field practitioners as well as limited trial implementation) and evaluation stage (assessment of android learning media developed).

The data collected is quantitative and qualitative data. Quantitative data is obtained from assessments and responses by expert validators, and target users. Meanwhile, qualitative data was obtained from criticism, suggestions and responses provided by the test subjects. Data collection instruments used in the form of closed questionnaires and suggestions. The aspects of assessment used refer to aspects of assessment developed by Elissavet and Economides (Elissavet, Georgiadou and Economides, 2000). Meanwhile, data analysis techniques use percentage data analysis techniques. The formula used is:

$$P = \frac{\sum x}{N} \times 100\%, NA = \frac{\sum p}{n}$$

Figure 1. Formula of Data Processing (Arikunto & Jabar, 2010)

Information:

P = Percentage Score

NA = Final Value

$\sum x$. = Number of Scores

N = Maximum Score

n = Many Question Items

The validity level of the developed learning media (Arikunto & Jabar, 2010) is shown in the table 1 below.

Table 1. Percentage Analysis Validation Criteria

| Present (%) | Validity Level | information |
|-------------|----------------|----------------------------------|
| 76 - 100 | Valid | Eligible/Not necessary to revise |
| 50 - 57 | Quite Valid | Decent Enough/Partial Revision |
| 26 - 50 | Less Valid | Less feasible/Partial Revision |
| < 26 | Not Valid | Not feasible/Total revision |

The level of practicality of the developed learning media (Arikunto & Jabar, 2010) is shown in the table 2 below.

Table 2. Practicality Criteria

| Present (%) | Practicality | information |
|-------------|-----------------|----------------------------------|
| 76 - 100 | practical | Eligible/Not necessary to revise |
| 50 - 57 | Quite Practical | Decent Enough/Partial Revision |
| 26 - 50 | Less Practical | Less feasible/Partial Revision |

RESULTS

The result of this development is an android wrestling learning application. This application presents five main menus that are about the faculty of teacher training and education, the history of wrestling, wrestling materials, attendance and me. The menu "FKIP" contains about the Faculty of Teacher Training and Education of Universitas Islam 45 Bekasi which is automatically connected to the official Instagram of FKIP so that students will not be late for information about FKIP and become a means of promotion of FKIP. On the menu "History" contains the history of world wrestling, the development of wrestling in Indonesia and the material of wrestling development. The "Material" menu contains gymnastics/wrestling formation materials, neck slams, foot attack techniques, basic bottom attack techniques, defensive techniques, Grecco roman, wrestling rules and a complete training video. The attendance menu contains a lecture attendance column. My menu contains lecturer profiles and lecturer social media links. The display of learning media android applications on mobile phones developed can be seen in the pictures below:



Figure 2. Display on Mobile



Figure 3. Display on Laptop/PC Screen

The results of the validity test were obtained from material experts by 92.33% for android applications as learning medium for wrestling and from material experts by 86.43% for the assessment of android applications as a learning medium of wrestling. Thus it can be concluded that the learning media developed through the android application has been valid and worth using.

After the media and material experts validated, the next trial was carried out on target media users, namely students of the physical education, Health, and recreation study program, Faculty of Teacher Training and Education, Universitas Islam 45 Bekasi, class of 2019/2020. The trial at this stage is carried out to test the practicality of the media being developed to further determine the feasibility of the developed learning media. The selection of students is done by selecting 18 students, there are six classes and each class is represented by three students who have android phones and have laptops with the Windows operating system.

Table 3. Comments and Suggestions by Material Expert Validators and Media Experts

| Validator | Comments and Suggestions |
|------------------|--|
| Material Experts | Ancient Grecco roman/roman-Greek wrestling materials should be developed and divided by step and stage |
| Media Members | It should be offline for faster system operation |

Trials conducted to target users (students) results obtained by 78.72%. With this result, the media developed belongs to a practical category so it is worth to use. Comments and suggestions from the target user can be seen in table 4 below.

Table 4. Student Comments and Suggestions (target users)

| Test Subjects | Comments and Suggestions |
|---------------|---|
| Respondents 1 | The material is complete and easy to understand |
| Respondent 2 | The operating system's response is less fast |
| Respondent 3 | FKIP material should not be included |
| Respondent 4 | The material is good and interesting but for the selection of fonts is too rigid |
| Respondent 5 | The layout display is good but the background color selection is less bright so when reading the phone should be approached |
| Respondent 6 | FKIP material doesn't seem really important because it's just a promotion about FKIP and can suck up decent data because it's connected to Instagram |
| Respondent 7 | Good material but constraints practice it is very difficult because of the limitations of facilities and infrastructure at home |
| Respondent 8 | The material is complete and clear, it looks good and hopefully there is also a version made on mobile phones in addition to android and laptops that use the windows operating system. |
| Respondent 9 | The most suitable learning media during the covid 19 pandemic |
| Respondent 10 | The material and look is good but sucking up a fair amount of data |
| Respondent 11 | It is better if given a discussion column for the discussion of the material given |
| Respondent 12 | Less bright font color |
| Respondent 13 | The material is good, the look is also okay but better than the video shown not from YouTube. |
| Respondent 14 | The medium of wrestling learning through android apps is very interesting |
| Respondent 15 | Android application for wrestling learning is very interesting but at the time of practice is very difficult and more fun When the practice is accompanied equally expertly |

| | |
|---------------|---|
| Respondent 16 | The material is very challenging to master |
| Respondent 17 | Almost all materials are based online so must always have an internet data package and data that is less than quite large |
| Respondent 18 | The look is interesting and the material is complete |

DICUSSION

During the pandemic covid-19 where activities must be done at home to prevent the spread of viruses, learning media developed is a medium that can be run anywhere and anytime. Android apps are part of mobile learning media. Mobile learning is one of the alternatives to the development of learning media. Mobile learning has practical characteristics and can be taken anywhere. One of the considerations in developing smartphones into mobile learning media is the basis of the system used. The operating system is a link between the application and the hardware so that the user can carry out certain functions. (Amirullah & Hardinata, 2017). Learning media in the form of android-based mobile learning applications is very feasible to use and android-based mobile learning development is expected to provide benefits, especially to students in the learning process (Alhafidz & Haryono, 2018).

Wrestling learning media based on this android application has 5 main menus namely FKIP, History, Material, Attendance, and Me. The "FKIP" menu contains about the history, information and promotion of the Faculty of Teacher Training and Education of Universitas Islam 45 Bekasi. This menu is expected to update students about the information in FKIP and can increase the number of FKIP students because in this menu there is a promotion about FKIP. The "History" menu contains about the history of world wrestling, the development of wrestling in Indonesia and the material of wrestling development. The "Material" menu contains gymnastics/wrestling formation materials, neck slams, foot attack techniques, basic bottom attack techniques, defensive techniques, Grecco romance, wrestling rules and a complete training video. The "attendance" menu contains a column of college attendance. The "me" menu contains lecturer profiles and social media links of lecturers. The important thing is that the existing mobile must be connected to the internet so that users can explore any part of the world including in search of supporting and complementary materials for learning (Majid, 2012)

Based on trials conducted to target users, the learning media of wrestling based on android applications has decent results to use. This is in line with the development of penjas-pedia application on android-based smartphones as a medium of physical education learning for grade VII at SMPN 1 Bangkalan has a result of 0.809782609 with the category "Excellent" (Marvin, 2018).

The wrestling learning media application developed in this study cannot be run on all types of mobile devices considering that this application can only be run on Android-based mobile devices and windows operating laptops. Because of that, it is hoped that the development of applications with types that can be run on devices with different operating systems is

expected. With the development of learning applications on mobile devices, it is hoped that it can increase the benefits of mobile devices in education and provide motivation for student learning. With applications like this, hopefully it can provide an interesting and new learning safety for students.

CONCLUSIONS

The product developed is wrestling learning media in the form of an Android application. This app is compatible with Android phones and laptops / computers with Windows operating system. The application installer is packaged in the form of an APK file. This application presents five main menus that are about the faculty of teacher training and education, the history of wrestling, wrestling materials, attendance and me. The menu "FKIP" contains about the Faculty of Teacher Training and Education of Universitas Islam 45 Bekasi which is automatically connected to the official Instagram of FKIP so that students will not be late for information about FKIP and become a means of promotion of FKIP. On the menu "History" contains the history of world wrestling, the development of wrestling in Indonesia and the material of wrestling development. The "Material" menu contains gymnastics/wrestling formation materials, neck slams, foot attack techniques, basic bottom attack techniques, defensive techniques, Grecco romance, wrestling rules and a complete training video. The attendance menu contains a lecture attendance column. My menu contains lecturer profiles and lecturer social media links. The display of learning media android applications on hp developed can be seen in the pictures below: Based on the results of the feasibility test, it was obtained 92.33% for material experts, 86.43% for media experts, and 78.72% for target users. Therefore, the application developed is suitable for use as a wrestling learnin media.

SUGGESTION

For further product development, the authors suggest that the development of wrestling learning media can be further improved in the learning video section so that user interactivity with the media increases and the delivery of material is more interesting and interactive. In addition, it is hoped that other researchers can develop similar learning media that can be operated on devices with other operating systems and different materials.

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