DEVELOPMENT OF EDUCATION GAME BASED ON LOCAL WISDOM RELIGION LESSONS IN PAUD IN SEMARANG CITY

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Abstract-Educational games based on local wisdom religious subjects are made for learning media in early childhood in order to provide enjoyable learning. Nowadays religious education in early childhood is very lacking, there are still many parents who lack religious education in children. This educational game has learning about the local wisdom of religions found in Indonesia, besides learning there are games such as finding traces, right/wrong, and puzzles, so that children are not bored in the learning process. The method used in this study is waterfall, where the stages include: the stage of Communication, Planning, Modeling, Contruction and Deployment with system design include: designing Use Case Diagrams and Activity Diagrams. Making this application can benefit several parties such as teachers and students, because with this educational game media teachers can provide learning easily and students can quickly understand what is explained by the teacher.

Keywords-Educational Games, Religious Education, PAUD

I. INTRODUCTION

Religious education is a process of developing the creativity potential of students or students who aim to realize human beings who have faith and devotion to God, noble character, independent and responsible for themselves [1]. Religious education is an education that provides knowledge and shapes the attitudes, personality, and skills of students in practicing their religious teachings, which are carried out at least through subjects or lectures on all paths, levels, and types of education [2].

Early childhood education (PAUD) is a coaching effort aimed at children from birth to the age of six years which is carried out through the provision of educational stimuli to help growth and physical and spiritual development so that children have readiness in entering further education [3]. Education is important for the formation of personal and human character, providing early education is an important factor in personal formation and character [4]. Some people refer to this phase or period as the golden age because this period really determines what they will be if they mature both in terms of physical, mental and intelligence [5].

It is undeniable that there are still many people who adhere to religion but have not understood more about what the religion teaches, not even those who only use the name of their religion as a complementary data on the KTP. Especially nowadays parents are very busy with their respective work, no matter the child's religious education and the level of moral goodness of children. With the lack of parents' time to pay attention to children's religious education on the grounds that they are tired of earning a living, the child is more free and increasingly lack of knowledge about religion [6].

Local wisdom is local knowledge created from the adaptation of a community that comes from life experiences communicated from generation to generation. Local wisdom is thus local knowledge that is used by local communities to survive in an environment that blends with the belief system, norms, culture and is expressed in the traditions and myths adopted for a long time [7].

The education world of Android-based learning applications can now be accessed anytime and anywhere, without limitation in obtaining information about education, because education is an important factor in forming quality individuals [8]. Educational games are a very enjoyable activity and an educational method or tool that is educational and useful for improving language skills, thinking and associating with the environment or to strengthen and display limbs in children, develop personalities, bring closer relations between educators and students, then channel the activities of students and so on [3].

The use of multimedia in education produces different and meaningful learning processes. Multimedia-based learning has an important role in the learning process in early childhood to be interested in the learning process [9]. Along with the development of current technology, it should be able to be utilized appropriately because by utilizing technology it can help and facilitate various things, especially in terms of learning [10].

Based on the background above, there is a need for learning media to help children in learning local wisdom-based religious subjects. Therefore the author will design

a local wisdom-based educational game for religious subjects for early childhood.

II. METHOD

According to Sugiyono [11], the research method is a scientific way to obtain data with specific purposes and uses. The system development method used in this educational game based on local wisdom is using the waterfall model according to Pressman. The steps to be taken are as follows: Communication, Planning, Modeling, Construction, Deployment. The description of the waterfall model can be seen in the following picture:
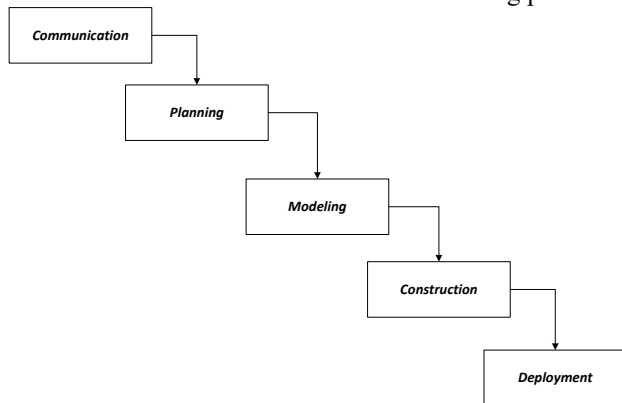

Figure 1. Waterfall Model

III. RESULTS AND DISCUSSION

A. Communication

At this stage the researcher communicates about the problems faced and collects the required data. In the case of the field, problems were found, namely the learning of religious subjects, there were no tools or media to explain the diversity of religions in Indonesia. The lack of aids in the learning process affects the constraints of learning in early childhood. Religious education from an early age is very important, because understanding or knowledge of religious diversity can foster an attitude of tolerance among religious people. Therefore the author identified the problem and formulated a solution that was felt to solve the existing problem, namely how to build learning through educational games for religious subjects for early childhood.

B. Planning

Is a continuation of the communication process, at this stage the author scheduling the work to be carried out, and the process of working on the system.

1) Needs Analysis
   This stage is analyzing what is needed in making the application and scheduling the time needed. Application requirements include: pictures of places of worship, people's characters, music or sounds, and animations in the application.

2) Application Design
   This stage is the making of application designs that will be made. In doing application design, it takes approximately 2 weeks.

3) Coding
   This stage includes coding or programming language to be able to do commands in the application that will be made. For coding, it takes approximately 1 week.

4) Application Testing
   This stage is to export the project into the APK, which will be included or installed on Android.

5) Application Revision
   After testing the application, if there is an error or error will be revised. At this stage, it takes 1 week to revise the application.

C. Modeling

It is the stage of modeling educational game products using software to design product designs and edit images or animations that will be needed. The software used is Adobe Photoshop CS3 and Adobe Flash CS6.

Figure 2. Product Design

D. Construction

At this stage testing of the application is carried out, testing in this educational game is done using the blackbox test. The blackbox trial method focuses on the functional requirements of the software. Therefore the blackbox trial allows software developers to create a set of input conditions that will train all the functional requirements of a program.

E. Deployment

Init stage is the stage of software implementation to the customer, periodic software maintenance, software repair, software evaluation, and software development based on feedback provided so that the system can continue to run and develop according to its functions.

In this discussion there are 4 discussions, namely, discussion of the results of the application, discussion of the results of validation, discussion of pre-practicalisation, and discussion of effectiveness:

a   Discussion of Application Results
This educational game application has several menus and sub menus, including:

1. The main menu, is the initial menu when the application is opened inside, there are five main menus of the educational game application, namely the Learning, Playing, Hints, Profiles, and Exit menus.

2. Learning Menu, is a menu used by learning. There are 2 sub menus, namely the Place of Worship menu and Good / Bad Things. Menu of Place of Worship, learning of religions in Indonesia, and menu of Good / Bad Things, learning about behavior that can be done and not done.

3. Play menu, is a menu used for games. There are three games, namely searching for traces, right / wrong, and puzzles.

4. The Directions menu, is a menu that is used for educational game application usage instructions.

5. Profile menu, is a menu that contains profiles about educational game applications.

6. Exit menu, used to exit the application.

b   Discussion of Validation Test
Test validity test to determine the feasibility of educational game applications made by researchers. Tests are carried out by media expert validators and material expert validators on the application through a validity assessment instrument sheet.

After validation by the media expert validator and material expert through the assessment aspects, get the following results:

1. Validation of Media Experts
The overall results obtained are 80%. These results are obtained through the average number of all aspects of the two validators. Based on the results of the overall validation tests conducted to media expert lecturers obtain results as much as 80% so that the application of religious subject education games is included in very valid criteria, therefore it can be concluded that the application of religious subject education games is successful and feasible to use.

2. Material Validation
The overall results obtained were 93.33%. These results are obtained through the average number of overall aspects of the validator. Based on the results of the overall validation tests conducted to the material expert lecturers obtained results of 93.33% so that the educational game application for religious subjects is included in very valid criteria, therefore it can be concluded that the

application of religious subject education games is successful and feasible to use.

c   Discussion of Practical Results
Multi-purpose practical test to determine the extent to which the ease and implementation of religious education game applications. The application trial was conducted in BHINNEKA PAUD with three teachers through a practical assessment instrument sheet.

After a practical test is carried out by the user through the assessment aspects of the application then the following results are obtained:

1. The ease of the educational game gets an average yield of 84.4%
In the convenience aspect criteria there are three assessment criteria, namely about the content in the application and animation in the educational game. The results of 84.4% were obtained through the number of scores on the third aspect of the teacher divided by the number of aspects of the three teachers and multiplied by one hundred percent.

2. The educational game learning aspect gets an average yield of 82.2%
In the convenience aspect criteria there are three assessment criteria, namely about the content in the application and animation in the educational game. The results of 82.2% were obtained through the number of scores on the third aspect of the teacher divided by the number of aspects of the three teachers and multiplied by one hundred percent.

3. The aspect of educational game play gets an average yield of 86.6%
In the convenience aspect criteria there are three assessment criteria, namely about the content in the application and animation in the educational game. The results of 86.6% were obtained through the number of scores on the third aspect of the teacher divided by the number of aspects of the three teachers and multiplied by one hundred percent.

So that the overall results obtained are 84.43%. These results are obtained through the average number of all aspects of the two validators. Translating the results of the overall percentage of scores into values using intervals and qualitative criteria is as follows, the impractical criteria have an interval of 0-19.99%, the less practical criteria have an interval of 20-39.99%, the criteria are quite practical ranging from 40 to 59.99%, criteria practically having intervals of 60-79.99% and very practical criteria ranging from 80-100%. Based on these criteria the results of the overall practicality test conducted to the teacher obtained results as much as 84.43% so that the application of religious education games in criteria was very practical for early childhood.

A. Effectiveness Test Results

This effectiveness test aims to assess the effect or positive impact of edukassi game applications. The effectiveness test is done by submitting the response questionnaire and product in the form of an educational game application to the teacher who teaches in the field. The effectiveness test was carried out by 5 teachers who taught in BHINNEKA PAUD.

Based on the calculation of the User Satisfaction Index (IKP) obtained 88.56%, it can be concluded that the use of educational games for religious subjects for early childhood is very satisfied.

IV. CONCLUSION

The results of the study and discussion the researchers can draw conclusions as follows:

1) Calculation of validity test results

The results of the evaluation of the general feasibility aspects yielded 82.5%, the language feasibility aspect gained 77% and the graphic feasibility aspects obtained 80% results. So that the overall results obtained are 80%. From the calculation above, it can be concluded that the application of educational subjects for religious subjects is classified as very valid and stated to be very feasible to use.

2) Calculation of practicality test results

The results of the assessment of the feasibility aspects of obtaining results of 84.4%, the aspect of learning feasibility obtained 82.2% and the feasibility aspect of the game obtained 80%. So that the overall results obtained are equal to 84.43%. From the calculation above it can be concluded that the application of religious subject education games is classified as very practical to use.

3) Calculation of effectiveness test results

Based on the calculation of the User Satisfaction Index (IKP), the results of 88.47% were obtained, so it can be concluded that the use of religious education game applications for early childhood is very satisfied.

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