DEVELOPING RESPONSIBLE APP APPLICATIONS BASED ON E-LEARNING TO SUPPORT ONLINE LEARNING IN ELEMENTARY SCHOOLS

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ABSTRACT

The aims of this study to develop a Responsible App Based on E-Learning as an Online Learning Support for teachers and students in elementary schools. This type of research is development research which refers to the research procedure proposed by Borg & Gall starting from the information gathering stage to the final product revision in the form of the Responsible App application. The research sample was teachers and students, a total of 51 people. The product development procedure begins with preliminary studies, planning, initial product development, validation, revision, limited trials, operational product revisions, operational trials to final product revisions. The data collection techniques used in this study were observations, interviews, questionnaires, and documentation techniques which were analyzed with percentage data analysis and criteria for validity, practicality and product effectiveness. The results showed that the development of the Responsible App application based on E-Learning can be used as Online Learning Support for students in elementary schools based on the validation result of 1.00 on very valid criteria. The results of the practicality test and product effectiveness test, respectively, have a percentage of 91.23% and 93.60% on the very practical and very effective criteria. Thus, it can be concluded that the development of the Responsible App application is appropriate to be used as a support for students' online learning in elementary schools. The results showed that the development of the Responsible App application based on E-Learning can be used as Online Learning Support for students in elementary schools based on the validation result of 1.00 on very valid criteria. The results of the practicality test and product effectiveness test, respectively, have a percentage of 91.23% and 93.60% on the very practical and very effective criteria. Thus, it can be concluded that the development of the Responsible App application is appropriate to be used as a support for students' online learning in elementary schools. The results showed that the development of the Responsible App application based on E-Learning can be used as Online Learning Support for students in elementary schools based on the validation result of 1.00 on very valid criteria. The results of the practicality test and product effectiveness test, respectively, have a percentage of 91.23% and 93.60% on the very practical and very effective criteria. Thus, it can be concluded that the development of the Responsible App application is appropriate to be used as a support for

students' online learning in elementary schools. 23% and 93.60% on the very practical and very effective criteria. Thus, it can be concluded that the development of the Responsible App application is appropriate to be used as a support for students' online learning in elementary schools. 23% and 93.60% on the very practical and very effective criteria. Thus, it can be concluded that the development of the Responsible App application is appropriate to be used as a support for students' online learning in elementary schools.

Keywords*: Responsible App, E-Learning, and online learning.*

INTRODUCTION

According to Pilang and Muchlis (2013) life cannot be separated from education because humans are not created just to live, but there is a purpose that is more noble than just life that must be realized and that requires knowledge obtained through education. That is the essential difference between humans and other creatures that makes humans superior and noble. Whole Indonesian people become the culmination of achieving national education goals as a process of true humanity and humanity. This is the hope and dream of the whole community.

The balance between intellectual intelligence, social intelligence, emotional intelligence, and spiritual intelligence is the key for the younger generation to survive in the midst of globalization. The combination of these four types of intelligence is able to realize the hopes of a safe and peaceful social life. The Indonesian people are known for their friendly, courteous and polite attitude. However, changing times have made the good values that have been instilled long ago experience a shift.

If ethics, personal decency, and social decency become a measure in the life of the nation and state, then it can be concluded that humanities education in Indonesia is really experiencing a setback. This phenomenon can be observed and felt from the character and behavior of students who do not reflect the characteristics of an educated human being. This phenomenon has even become a global phenomenon, especially in big cities and is a sign of a new civilization of humanitarian and humanizing processes, where educational institutions have not been able to provide a holistic balance between cognitive, psychomotor and affective aspects of students optimally.

Educators and psychologists see this phenomenon stemming from the failure of humanities education or the failure of educational institutions to humanize students in the educational environment. The bad attitude shown by students and the younger generation is an anomaly of akhlakul karimah. Besides that, there are also those who state that the failure is the result of a school orientation error which focuses more on teaching in the form of an emphasis on aspects of intellectual intelligence rather than the development of education in a broader sense such as social intelligence, emotional intelligence, kinesthetic intelligence, and spiritual intelligence. Pilang and Muchlis, 2013: 4).

A series of failures that occur are very complex factors as an empirical fact of the failure of humanities education with student behavior in social life. This empirical fact seems to confirm that today's social life seems to have lost track of realizing various human ethics that are upheld such as egalitarianism, morality, spirituality, and empathy in social life. One attitude that is very important to form a good character but is now starting to be underestimated is discipline. In the current era of modernization, it is as if the younger generation is drifting away from the conveniences presented before their eyes as a result of modernization.

In terms of assessing and evaluating student learning, both in the classroom and in the school environment, there are still some mistakes that contribute to the failure of the development of the next generation of young people, where most teachers focus more on student intelligence in terms of knowledge. In fact, the character of students, especially discipline, is also important to optimize. This is because character education is also the goal of Indonesian national education.

The lack of instruments that can be used to support student online learning is one of the reasons that make assessments and evaluations for disciplinary aspects mostly based on the teacher's point of view so that they are prone to being subjective. This is what motivated researchers to develop a set of applications that are expected to be used as a support for student online learning in a study entitled "Development of E-Learning-Based Responsible App Applications as Supporting Online Learning in Elementary Schools".

METHODS

The method used in this research is the development method or also known as Research and Development (R&D). According to Borg & Gall in Ibrahim (2020: 93) what is meant by development research is: "a process used to develop and validate educational products" which means a process used to develop and validate educational products. The goal is to find novelty, develop, and test the effectiveness of a product. The product developed in this research is an application that the researcher calls Responsible App.

In this study, researchers combined two research methods, namely qualitative research methods and quantitative research methods. The use of qualitative methods aims to determine the initial conditions in the field and to supervise the implementation of research while the quantitative methods are used to determine and measure the validity, practicality and effectiveness of the products being developed.

The subjects of this study were fifth grade students at SD Inpres Shipyard IV and SDN Mangkura II for the 2021/2022 academic year. The research subjects for the limited trial phase consisted of one fifth grade teacher and 15 fifth grade students at SD Inpres Shipyard IV, while the research subjects for the operational trial phase consisted of one fifth grade teacher and 34 fifth grade students at SDN Mangkura II. Students will be given guidance to operate the Responsible App

application that has been developed and is under the control of the class teacher and under the supervision of parents/guardians of students.

The product development method used in this study is a mixed method which is a combination of inductive and deductive methods with procedural models. The procedural model is a model that is descriptive or shows the steps that must be followed in order to use the product.

The development procedure that will be carried out in this study consists of nine steps that refer to the research procedure proposed by Borg & Gall with modifications at several stages to further simplify research procedures according to the needs of researchers. The steps taken in this study started from needs analysis, planning, product development, product validation, limited trials and operational trials to the final revision of the product.

The main instrument used in this study is the Responsible App application which is based on e-learning, the product developed is adapted to the components needed in the online learning process to familiarize and measure student discipline. The supporting instruments used in this study were validation sheets, observation guidelines, interview guidelines, questionnaire sheets, and the Responsible App application.

In the instrument validation process involving experts/experts to evaluate the content, format, practicality and effectiveness of the product. The instrument validator in this study was Dr. Sutia Budi, S.Pi., M.Si as an expert validator with doctoral qualifications and has experience in the IT field, he serves as Head of IT at Bosowa University. The practitioner validator is Mr. Andi Hamzah Fansury, S.Pd., M.Pd who is an expert lecturer with Masters qualifications and has a lot of experience teaching in various departments at the Faculty of Teacher Training and Education, Bosowa University.

The development procedure that will be carried out in this study refers to the research procedure according to Borg & Gall in Hasyim (2016: 86) which consists of ten simplified steps.

The data collected in this development research consisted of two types of data, namely qualitative data and quantitative data. Qualitative data includes responses and suggestions from expert validators and practicing validators, responses and suggestions from teachers, responses and suggestions from parents/guardians of students, and descriptions of the implementation of research observation activities. Quantitative data consists of validation sheet scores from the validator, student questionnaire scores, and teacher questionnaire scores. Data collection techniques used in this study were observation, interviews, response questionnaires, and documentation.

FINDINGS AND DISCUSSION

Needs analysis was carried out through preliminary observations regarding online teaching and learning activities and interviews with teachers, students, and parents/guardians of students. This is done to find out the initial conditions for implementing the online learning process, the use of technology in the online learning process, and student participation in the online learning process.

The online learning process is carried out by utilizing supporting media, namely the Whatsapp communication application, in which the teacher creates a group for one class which contains the personal contacts of students or parents/guardians for further teaching and learning processes to be carried out through the group. The teacher sends material in the form of a learning video link sourced from a YouTube video sharing application or captured in the form of an image of learning material originating from an electronic book.

Teachers also use the Zoom video conferencing application to carry out the teaching and learning process online. The use of zoom is carried out to establish two-way communication between teachers and students so that the learning process becomes more interactive. The time needed for students to complete online learning for one learning material along with practice assignments is 2-3 hours and some can even reach one day. The time is longer when compared to class hours during the face-to-face learning process which only takes an average of 2 x 35 minutes for each lesson. The teacher believes that the reason students need more time to do online learning is influenced by the level of students' understanding in understanding the learning material provided.

Based on the results of interviews with teachers, students, and parents/guardians of students, it shows that the constraints experienced during the online learning process are the limited time that parents/guardians have to accompany students' online learning process due to the obligation of parents/guardians of students to work, other constraints. also comes from the limitations of devices in the form of smartphones where not all students have personal smartphones that are specifically used during the online learning process. Some students have to wait for their parents to finish working to use their parents' smartphones so they can do online learning.

From the observations, it shows that there are deficiencies in the media supporting the learning process used by teachers and students, such as using the basic Zoom application, which has a limited time, only 40 minutes for each meeting session made by the teacher and for using the Whatsapp application, the teaching and learning process is only occurs in one direction so as to make the learning process less interactive.

Referring to the problems that occur, the researchers developed an e-learning-based learning application that is equipped with features that can support the online learning process, help students to remain disciplined in carrying out the online learning process and assist teachers in providing material and practice questions to students. .

The development of the e-learning-based Responsible App application is carried out to create a learning application that is easy to operate to support the online teaching and learning process while still optimizing the three main aspects of learning, namely cognitive, affective and psychomotor aspects.

Product development begins with the planning stage by determining the type and concept of the application to be developed. The products developed include website-based mobile applications made for mobile devices such as

smartphones, tablets and laptops. The product concept being developed is a learning application, so the features to be made are adapted to the learning components. To access the Responsible App application, users need to enter the website address in the form of the e-learningforstudent.com link in the browser used.

After going through the validation and revision stages according to the validator's suggestions and input, the Responsible App application was declared feasible and met the product validity criteria to be tested. The next step is to carry out the trial process which is divided into two stages, namely limited trials and operational trials using data collection techniques in the form of observing the implementation of activities, interviews to find out the opinions of teachers and students, as well as distributing response questionnaires to determine the level of practicality and effectiveness of the application. Responsible App as a support for online learning for students.

The limited trial is the first stage of the trial, where at this stage the research subjects using the Responsible App application are limited. This is to determine the practicality and effectiveness of products developed on a small scale. A limited trial was carried out at SD Inpres Shipyard IV located at Jalan Butta-Butta Caddi No. 8, Tallo District, Makassar City. The research subjects were 15 fifth grade students consisting of 5 boys and 10 girls. The trial was conducted on Wednesday, August 25, 2021.

The operational trial is the second phase of the trial carried out on a larger scale. Operational trials are carried out with the aim of obtaining more accurate data regarding the practicality and effectiveness of using the product being developed. Operational trials were carried out at SDN Mangkura II located at Jalan Boto Lempangan No. 65, Sawerigading, Ujung Pandang District, Makassar City. The research subjects were 34 students consisting of 19 male students and 15 female students. The trial was conducted on Monday, September 6, 2021 which was divided into three sessions.

Product validity level data analysis was carried out with the aim of determining the validity of the Responsible App application. Validity is obtained from the assessment sheet of validation results by expert validators and practicing validators. The results of the assessment data tabulation show that of the 32 statement items contained on the validation sheet. Validator 1 gives 9 values for score 3 and 23 values for score 4 which means Very Valid (SV) and does not provide values for scores 1 and 2 which mean Less Valid (KV). Validator 2 also gives scores of 3 and 4, 12 points for score 3 and 20 points for score 4 which means Very Valid (SV), also does not give values for scores 1 and 2 which mean Less Valid (KV).

From the results of calculations using the Gregory formula, a validation value of 1 is obtained. Based on product validity criteria, the results are included in the very high validation category. So overall, the validated aspects have met the validity criteria of learning applications in supporting students' online learning processes in elementary schools.

Product practicality level data analysis was carried out to determine the practicality level of the product after being tried out. Product practicality level data were obtained from the results of filling out student response questionnaires in limited trials and operational trials.

The average practicality of the product is obtained by adding up the percentage of the results of filling out the response questionnaires in the limited trials by teachers and students, which are 100% and 92%, respectively, with the percentages of the results of filling out the response questionnaires in the operational trials by teachers and students, each of which is 80% and 92.94% then divided by four so that the results of data analysis show that the average practicality level of the Responsible App application is 91.23%. This means that the e-learning-based Responsible App application meets very practical criteria.

Product effectiveness level data analysis was carried out to determine the level of product effectiveness after being tried out. Product effectiveness level data was obtained from the results of filling out student response questionnaires in limited trials and operational trials.

The average product effectiveness is obtained by adding up the percentage of response questionnaires filled out in limited trials by teachers and students, which were 100% and 97.33%, respectively, with the percentage of response questionnaires filled out in operational trials by teachers and students, respectively respectively 80% and 97.06% then divided by four so that the results of data analysis show that the average level of product effectiveness is 93.60%. This means that the e-learning-based Responsible App application meets the criteria of being very effective.

The discussion of the results of this research is focused on four things, namely the achievement of research objectives, specific findings obtained in the research, constraints encountered during the research, and research weaknesses.

A series of e-learning-based Responsible App application development and trials that have been carried out in this study are used to assess whether the developed Responsible App application meets the criteria of validity, practicality, and effectiveness as a support for student online learning. As a result, the e-learning-based Responsible App application has met the criteria of validity, practicality, and effectiveness based on validation results, limited trial results, and operational trial results as a support for online learning in elementary schools.

By fulfilling the criteria for validity, practicality, and product effectiveness, it can be concluded that the objectives of developing an e-learning-based Responsible App application as a support for students' online learning in elementary schools have been achieved.

The specific findings obtained during the development research are as follows:

1. Student discipline based on the results of the needs analysis is as follows:
a. The learning media used during the online learning process are whatsapp, zoom, and YouTube.
b. Student discipline during online learning is low.

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c.   Use of the Responsible App Application
d.   Online learning media uses the Responsible App application.
e.   The Responsible App application is valid, practical, and effective as a support for student online learning.

The obstacles encountered during the implementation of this research were:

1).   The implementation of distance learning made it difficult for researchers to provide direct socialization regarding the use of the Responsible App application to teachers and students at SDN Mangkura II.
2).   Researchers experienced difficulties in collecting student response questionnaire data because some students did not understand how to fill out a questionnaire.
3).   Due to the busyness of parents/guardians of students, it was difficult for researchers to interview parents/guardians of students to find out their opinions while accompanying students when operating the Responsible App application.

Weaknesses encountered during the implementation of this research were divided into two, namely the limitations of the researchers and the limitations of the product being developed.

CONCLUSION

Based on the results of the research and discussion in this study, it can be concluded that the development of the e-learning-based Responsible App application as a support for students' online learning in elementary schools. 1) The results of the research in the preliminary study in the form of a needs analysis for student discipline during the online learning process, show that teachers and students need learning applications that can support the online teaching and learning process. 2) The prototype for developing an e-learning-based Responsible App application as a support for online learning for students in elementary schools produces a learning application consisting of 12 components with seven main features, namely homepage, assignments, materials, discussion forums, my class, students, and the log-out feature. . The developed application is equipped with a timer which can be an indicator of supporting student online learning based on the results of validation and trials which are carried out in stages, namely limited trials and operational trials. The results of testing the validity, practicality, and effectiveness of the developed Responsible App application show several things. First, the Responsible App application meets the validity criteria as an e-learning-based online learning application. Second, the results of the practicality and effectiveness tests show that the Responsible App application is practical and effective to be used as a support for students' online learning in elementary schools.

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