THE DEVELOPMENT OF AN ANDROID-BASED E-MODULE IN THE HISTORY OF DA'WAH COURSE IN STATE ISLAMIC UNIVERSITIES

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ABSTRACT

In the course of the History of Da'wah at the Imam Bonjol State Islamic University of Padang, it is adequate for the student learning process. However, due to COVID-19, it requires an innovation that utilizes technology that must comply with health protocols, and must also be able to achieve maximum learning outcomes. This study was conducted amid the COVID-19 pandemic as a learning technology innovation in dealing with the world disaster that has an impact in the field of education. This study aimed to determine the development and feasibility of the e-module of the History of Da'wah on the learning outcomes of the History of Da'wah course. This type of study was a Research and Development (Rand D) using the IDI (Instructional Development Institute) development model. The assessment of media experts, material experts, linguists, student and lecturer practicality were used as research data which were analysed by descriptive percentages. This study produced a product of the e-module of the History of Da'wah with the assessment of material experts of 79.17%, media experts of 80%, linguists of 78%, student responses of 85.42%, and teacher responses of 93.18%. Based on the results of this study, it can be concluded that the product of the e-module of the History of Da'wah is suitable for use in student learning for the History of Da'wah course at the Imam Bonjol State Islamic University of Padang.

Keywords: android, e-module, history of Da'wah, COVID-19

INTRODUCTION

The advancement of information technology of industry 4.0 has now been applied in various fields, one of which is education. The development of information and communication technology has given an influence on the world of education, especially in the learning process. According to Rosenberg, referred to in (Sudibyo, 2011), with the development of the use of information and communication technology, there are five shifts in the learning process, including 1) from training to performance; 2) from classrooms to anywhere and anytime; 3) from paper to online, gadgets, or channels; 4) from physical facilities to network facilities; and 5) from cycle time to real-time. The learning process is a process of interaction between students and lecturers using theory or learning resources to combine practice and theory. Yet, the process of interaction between students and lecturers using conventional learning theory or resources is impossible at this time due to the COVID-19 pandemic that occurred in the world, The impacts of the COVID-19 pandemic on the learning process include: 1) Changing face-to-face learning to online learning; 2) Increasing the use of technology in learning; 3) Increasing student learning independence (Firman,

2020). Due to the impact of COVID-19, possible learning is distance learning. However, what should be noted in distance learning is the quality of learning resources provided to students. The source of learning is the availability of teaching materials.

The problems described above occur in the Faculty of Da'wah and Communication Studies, the Islamic Broadcasting Communication Study Program, Imam Bonjol State Islamic University of Padang (UIN IB Padang). They use conventional media, such as books in lecture activities so that it requires a modification in lectures from conventional media to electronic modules that can be accessed by students via Android-based smartphones during the COVID-19 pandemic. Electronic modules can also reduce the economic burden of buying or printing modules and allow to increase student interest and learning outcomes. Using the e-module is an effort to comply with health protocols in the field of education, which is by maintaining the distance between humans. Besides, the e-module can also make it easier for students of the Imam Bonjol State Islamic University of Padang (UIN IB Padang) to obtain lecture material given by lecturers without having to taking notes of the material or searching for lecture references. Also, the e-module will not be damaged and can be easily accessed via a smartphone.

There are four criteria for the assessment technique carried out at the Imam Bonjol State Islamic University of Padang consisting of activities, assignments, midterm examinations, and final semester examinations. The History of Da'wah course is a compulsory subject for students of the Faculty of Da'wah and Communication Studies, the Islamic Broadcasting Communication Study Program, Imam Bonjol State Islamic University of Padang (UIN IB Padang), but none of them obtains maximum learning outcomes. The following is the Table of the average scores of students at the Faculty of Da'wah and Communication Studies, the Islamic Broadcasting Communication Study Program, Imam Bonjol State Islamic University of Padang (UIN IB Padang). Data on student learning outcomes for the 2018/2019 Academic Year in the History of Da'wah course are obtained as follows:

Table 1. Student Learning Outcomes for the 2018/2019 academic year in the history of Da'wah course

Student Scores	Number	%
A	0	0%
B	34	97.14%
C	1	2.86%
D	0	0%
E	0	0%
Total	35	100%

Based on Table 1, it can be seen that the student scores in the Da'wah History course of 35 students, there are 0% of students who obtain A (0 students), 97.14% of students who obtain B (34 students), 2.86% students who obtain C (1 student), and 0% of students who obtain D (0 students). This shows that none of the student's scores in the History of Da'wah course of the Islamic Broadcasting Communication Study Program obtains the maximum score, which is A. Based on the data, the scores were taken for the midterm examinations are a combination of activity scores and the final semester examinations, in which the percentage numbers are not much different from the final scores in Table 1.

Based on these considerations, this study aims to develop an Android-based E-Module of the History of Da'wah that can make it easier for students to study the history of Da'wah during the COVID-19 Pandemic. This e-module is the same as a module in general, but the difference is that in the history of Da'wah, there are learning designs, learning materials, practice questions, and it is equipped with various features, such as images, audio, video, online discussions, and animations that make it easier for students to understand the material.

METHODS

This type of study used is Research and Development because this study includes educational development that aims to produce a learning product that is feasible to use as needed. According to Sugiyono (2014), development research is a method used to produce certain products and test the effectiveness of these products. In this study, the product developed was the E-Module of the History of Da'wah at the Faculty of Da'wah and Communication Studies, the Islamic Broadcasting Communication Study Program, Imam Bonjol State Islamic University of Padang (UIN IB Padang). This study was conducted using the IDI (Instructional Development Institute) approach/model. The development research approach is the research approach proposed by Van Den Akker. The research procedure starts with activities, including the stages of Define, Develop, and Evaluation (Akker, 1999).

Define

a) *Identify Problem,* which is identifying the problem by assessing the needs. Needs or problems arise from seeing the discrepancy between the current state and the desired state.
b) *Analyze Setting,* which is analyzing conditions which include characteristics of students, learning conditions, and relevant learning resources.
c) *Organize Management,* which is arranging the management of various tasks, responsibility, and time.

The research implementation begins with the stage of Define. Based on observations and interviews of the researchers with lecturers and students, data was obtained that the history of Da'wah required learning media in the form of e-modules. At this stage, analysis activities are carried out to determine the requirements for learning, such as concept analysis and student character analysis. In concept analysis, the aims are identifying, detailing, and arranging concepts from the History of Da'wah course which will be used as the content of the E-Module development. Course materials are arranged according to the skills or knowledge that students learn. The materials are in the form of text, images, audio, video, discussions and exercises.

Develop

a) *Identify Objectives,* which is identifying the instructional objectives that will be achieved. There are two kinds of instructional objectives, including general objectives (terminal objectives) and specific objectives (behavioural/enabling objectives).
b) *Specificity Methods*, which is determining the instructional method as an effort to achieve instructional objectives.
c) *Construct Prototypes,* which is compiling an instructional program prototype by the specific instructional objectives that have been formulated previously.

Implementation of the stage of Develop consists of designing an E-Module of the History of Da'wah and a series of validation activities for instruments, media, material and language by experts. Data obtained from questionnaires from media experts, language, and material validating the media that have been made, can be calculated the percentage value of feasibility of use in the field. Besides, it can also be identified as the deficiencies that need to be fixed. (Ridwan, 2007) The formula used in calculating the percentage of feasibility is:

Table 2.The percentage range of the feasibility of learning media with a scale of Likert

Category	Percentage Range
Very good (A)	$81.25\% < \text{percentage} \leq 100\%$
Good (B)	$62.5\% < \text{percentage} \leq 81.25\%$
Moderate (C)	$43.75\% < \text{percentage} \leq 62.5\%$
Poor (D)	$\text{percentage} \leq 43.75\%$

The validity criteria based on the final value are then presented on a scale of 0-100, as shown in Table 7. Furthermore, the validation results are analyzed on a scale (0-100) using the formula:

$$Validity = \frac{TSe}{TSh} x 100\%$$

Notes:
TSe: Total empirical score
TSh: Total maximal score

Table 3. Product validity categories

Score	Category	Notes
25.00-40.00	Not Valid	Cannot be used
41.00-55.00	Less Valid	Cannot be used
56.00-70.00	Quite Valid	Can be used after major revisions
71.00-85.00	Valid	Can be used after minor revisions
86.00-100.00	Very Valid	Very good to use

Evaluate

a) *Test Tryout,* which is conducting instructional prototype trials with several colleagues as a sample

b) *Analyze Results,* which is analyzing the test results of the instructional program prototype

c) *Implementation/Recycle,* which is the application or implementation if according to the results of the trial analysis, the instructional program prototype is adequate or has been improved.

The evaluation includes testing the E-module of the History of Da'wah, practicality, and effectiveness. After the validation data is collected, it is followed by practicality. The practical analysis used a Likert scale with the following steps:

a) Giving a score for each answer item of Strongly Agree (ST), Agree (S), Disagree (TS), and Strongly Disagree (STS).

b) Summing up the total score of each practitioner for all indicators.

c) Giving practical score by using the formula:

$$P = \frac{t}{N} x 100\%$$

Where:

P = final score

f = score acquisition

N = maximum score

Practicality categories can be seen in Table 4 below:

Table 4. Table of practicality categories

Score		Criteria
80% < x	100%	Very practical
60% < x	80%	Practical
40% < x	60%	Quite practical
20% < x	40%	Less Practical
0% < x	20%	Not practical

The effectiveness of the E-module of the History of Da'wahis assessed through the Paired Sample T-test and gain test. The Paired Sample T-test analysis was carried out with the SPSS application to conduct the T-test on the pre-test and post-test data. The gain-test data analysis technique is done by calculating the gain value (g) to determine the increase in student understanding. The gain-test data analysis technique is carried out by calculating the gain value (g) to determine the increase in student understanding.

$$g = \frac{Post - test\ score - pre - test\ score}{Maximum\ score - pre - test\ score}$$

Based on the results of calculations using the formula above, it is then interpreted into the category of the gain value criteria to obtain information about the increase in student learning outcomes which is classified as high, moderate, or low. The gain value interpretation is shown in Table 5.

Tabel 5. Gain value interpretation

G Value	Criteria
g > 0.7	High
0.7 < g < 0.3	Moderate
g < 0.3	Low

RESULT

The design of E-Module of the History of Da'wah in the History of Da'wah course used Sigil Software. This study used the IDI (Instructional Design Institute) model and produced a valid, practical and effective product of E-Module of the history of Da'wah.

1) Validation Test

The initial design of the E-Module of the History of Da'wah was performed by a feasibility test using a validator. This validation was performed by expert lecturers consisting of media lecturers from the Department of Educational Technology at Padang State University, the language lecturers of the Department of Language and Literature of Padang State University and material lecturers of the Department of Islamic Broadcasting

Communication, Imam Bonjol State Islamic University, Padang, and practitioners by lecturers of Islamic Broadcasting Communication at the State Islamic University Imam Bonjol Padang. The results of the expert validation of the E-Modul of the Da'wah History are shown in Table 6:

Table 6. Recapitulation of validation assessments

Description	Score	Category
Media	78.00	Valid
Material	79.17	Valid
Language	80.00	Valid

Based on Table 6, the results of the validity of the E-Module of the History of Da'wah development are categorized as valid. The results of the validity analysis of media, material and language can be seen in Fig. 1.
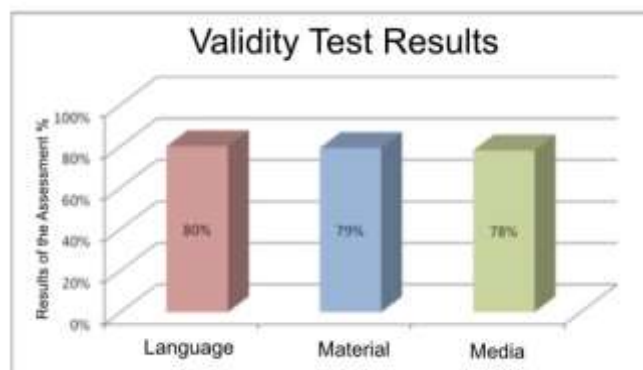

Fig 1. Graph of the Validity Test Results for the E-Module of the History of Da'wah

2) Practicality Test

The practicality test was performed on 32 students of State Islam University of Imam Bonjol Padang at the Department of Islamic Broadcasting Communication. The results of the Student and Lecturer Practicality of the E-Module of the History of Da'wah is summarized in Table 7.

Table 7. Recapitulation of Practicality Assessment

Description	Score	Category
Students	85.42	Very Valid
Lecturers	93.18	Very Valid

Based on the practicality test of the results of the practicality of the students and lecturers, the average practicality of the E-Module of the History of Da'wah media for students was 85.42% with the practical category and 93.18% for lecturers with the practical category. The implementation results can be seen in Fig. 2.
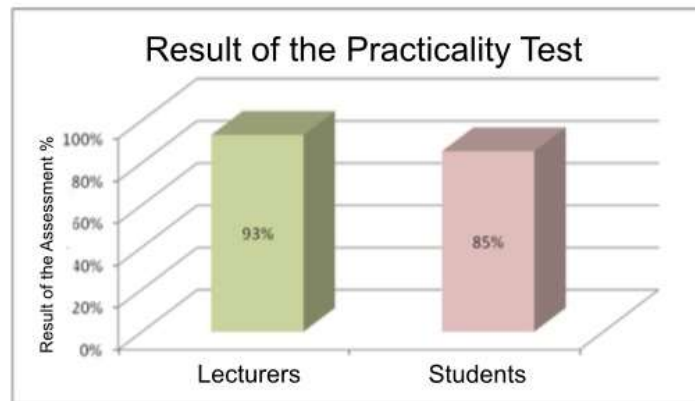
Fig 2. Graph of the Validity Test of the E-Module of the History of Da'wah

Therefore, it can be concluded that the use of the E-Module of the History of Da'wah is highly practical in the History of Da'wah course and has a positive influence in the lesson.

3) Effectiveness Test

The effectiveness test was performed on 32 students of Imam Bonjol State Islamic University in Padang, majoring in Islamic Broadcasting Communication by providing pretest and post-test. The effectiveness was tested using SPSS 22 of Paired Sample T-Test and the calculation of Gain.

Paired Sample T-Test

1) Output Analysis and Interpretation

Table 8. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	42.3750	32	15.26909	2.69922
	POST TEST	83.3750	32	9.31786	1.64718

Based on Table 7 of Paired Samples Statistic above, the statistical comparison of the post-test and post-test scores show that that the average pre-test score of the students was 42.38 with a standard deviation of 15.27. Meanwhile, the average post-test score of the students was 83.38 with a standard deviation of 9.32. The analysis of the paired samples of these statistics shows that there is an increase in the average data score for the pre-test and post-test of the students by 41.00.

2) Analysis and interpretation of the Output of the Paired Sample Test

Table 9. Paired Samples Statistic

	Paired Differences			t	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Pair 1 PRE TEST - POST TEST	-41.00000	17.74369	3.13667	-13.071	31	.000

Based on Table 8 of Paired Samples Statistic above, the statistical comparison of the post-test and post-test showed that the average pre-test score of the students was 42.38 with a standard deviation of 15.27. Meanwhile, the average post-test score of the student was 83.38

with a standard deviation of 9. 32. Based on the analysis of the statistical paired samples, it can be seen that there is an increase in the average data score of the pre-test and post-test of the students by 41.00.

3) Calculation of Gain Score

To determine the increase in student understanding, it is essential to calculate the gain score. It is known that the average post-test score of the students was 83.37. The average score of the pre-test of the students was 100. Based on this data, the calculation of the gain score is as follows:

$$g = \frac{Post - test\ score - pre - test\ score}{Maximum\ score - pre - test\ score}$$

$$g = \frac{83.37 - 41.00}{100 - 41.00}$$

Based on the above calculations, it shows that the gain score was 0.71. Therefore, the criteria for the gain score according to Hake is high. It shows the ability of the E-Module of the History of Da'wah in increasing students' understanding of the History of Da'wah material.

CONCLUSIONS

The E-Module of the History of Da'wah in the History of Da'wah course was developed inc the IDI (Instructional Design Institute) model which was performed in three stages, including Define, Development, and Evaluation. The development of the E-Module of the History of Da'wah is supported by Sigil Software as the primary software with the final result of the E-Module of the History of Da'wah for the History of Da'wah course. The E-Module of the History of Da'wah was tested on students of UIN Imam Bonjol Padang in the Islamic Broadcasting Communication Study Program Class of 2019 by performing a pretest and posttest, providing that the product was valid and practical before being tested for its effectiveness. Therefore, after considered valid, practical, and effective, it could increase student understanding while studying during the COVID-19 pandemic in the History of Da'wah course. The results of the validity of the E-Module of the History of Da'wah in the History of Da'wah course showed that the validation of material experts was 79.17%, indicating valid criteria. Media expert validation was 78%, indicating valid criteria. The last, validation of linguists was 80%, indicating valid criteria. The practical results of using E-module of preaching history for student practicality were 83.38% indicating very practical criteria and 93.18% practicality of lecturers with very practical criteria. The results of the effectiveness of the E-Module of the History of Da'wah in the History of Da'wah course show the effective criteria. Student learning outcomes based on the pretest and posttest were tested using the t Paired formula, obtaining the value of 13.07 with a significance of 0.000. Since the significance value was 0.00 <0.05, it can be concluded that there is a difference between the pretest and posttest scores of the students.

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