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Research Article

Development of Android-Based Interactive Learning Media on Nahwu Subjects in Class XI Madrasah Aliyah Ibnu Taimiyah Bogor

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Abstract:
In Nahwu Class XI Madrasah Aliyah Ibnu Taimiyah Bogor in Chapter Khobar Muqoddam Mumtada' Muakhor, the study intends to: 1) ascertain the process for developing Android-based Interactive Learning Media; 2) ascertain the viability of developing Android-based Interactive Learning Media in Nahwu Class XI Madrasah Aliyah Ibnu Taimiyah Bogor in Chapter Khobar Muqoddam Mumtada' Muakhor; and 3) ascertain the efficacy of developing Android-based Interactive Learning Media in Nahwu Class XI Madrasah Aliyah Ibnu Taimiyah Bogor in Chapter Khobar Muqoddam Mumtada' Muakhor. This study employs the research and development methodology (Research and Development). The results of the hypothesis test indicate that there is a significant difference between the pretest and posttest data for nahwu learning outcomes, with a significance value of 0.000 <0.05.
Keywords: Android, Learning Media, Nahwu, Research And Development

1. INTRODUCTION

Islam, as a religion recognized by Allaah Subhaanahu Wata'aala, was brought by Prophet Muhammad Shallaallaahu 'Alaihi Wasallam from the Arab nation (Hidayat, 2024). The Quran, as a guide to human life, was revealed in Arabic (Anisa & Khoiruddin, 2023). It is important for Muslims to learn its guidelines in order to be safe in this world and the hereafter, and this requires a deep understanding of the Arabic language.

Madrasah Aliyah Ibnu Taimiyah Bogor plays a role in educating the Muslim generation to master Arabic, including through teaching Arabic subjects such as Nahwu. However, in class XI there are obstacles such as lack of student enthusiasm, difficulty in understanding Nahwu material, and low learning outcomes. The underutilization of learning media by teachers might be a contributing factor in some of these issues.

This situation calls for a creative solution. One of the most successful strategies for raising student interest in the teaching and learning process is to use an innovative approach (F et al., 2023). It could be creative to encourage Nahwu instructors to use Android-based learning resources. It is anticipated that the use of educational technology will enhance student engagement and learning objectives, boost teacher effectiveness, and enhance the quality of Nahwu instruction.

This research, entitled “Development of Android-Based Learning Media in Nahwu Class XI Madrasah Aliyah Ibnu Taimiyah Bogor”, aims to explore the impact of using this media. Hopefully, it can overcome problems and improve Nahwu learning outcomes in class XI. The purpose of this medium is to make Nahwu lessons easier for teachers to teach, boost student interest in learning, and make the information easier to grasp.

2. THEORY OVERVIEW

2.1 Nahwu Subject

According to Yamin et al. (2023), in language nahwu means as a thariq (path) or qiyas (rule / rule) made by putting a nahw (model example), with the aim of directing (jihah) to a purpose (qashd) in the form of reading and at the same time correct meaning so as to avoid any error (lahn).

According to Natsir & As’ad (2024), the science of nahwu is the science that knows the changes in the end of sentences that are closely related to i'raf, sentence structure, and bina'. sentence form.

2.2 Android

According to Zhi & Selvarajah (2024), android is a mobile operating system that runs on a Linux platform to enhance the functionality of touch-screen gadgets like tablets and smartphones. Using Android involves touching, swiping, or tapping the device's screen (Hidayatullah & Nugraha, 2024). Additionally, android offers developers an open platform on which to build custom apps for a range of mobile devices (Liu et al., 2024).

According to Almuqren et al. (2024), android is an operating system embedded in gadgets, be it cell phones, tablets, and now also digital cameras and watches.

2.3 Interactive Learning Media

According to Habibie et al. (2024), constructive media includes student learning and the learning process, and interactive media falls under this category. Computer technology is a media instrument that has a significant impact on students' learning during the educational process. One computer-based learning tool that combines text, graphics, images, videos, animations, and music is the interactive media application (Korcz et al., 2024).

According to Sarwandi et al. (2023), interactive is related to two-way communication. The interaction between people (users) and computers (software or programs) in certain file formats is the communication component of interactive media (Ramadhana et al., 2024). Interactive learning tools can also be defined as everything related to applications and hardware that functions as an intermediary to deliver learning materials to students (Berutu et al., 2024).

3. MATERIAL AND METHOD

3.1 Research Ojectives

The purpose of this study is to examine how Class XI of Madrasah Aliyah Ibnu Taimiyah Bogor develops learning materials based on Android for Nahwu instruction. Furthermore, the purpose of this study is to assess the viability of Android-Based Learning Materials created specifically for Nahwu subjects in the classroom. Lastly, this study will assess how well Android-based learning resources help Class XI Madrasah Aliyah Ibnu Taimiyah Bogor students comprehend Nahwu content.

3.2 Time and Place of Research

The research time was conducted for four months starting from November 2023 to January 2024, located at MA Ibnu Taimiyah Bogor which is located at : Kp.pasir Tengah RT. 04 RW. 03, Village. Sukaharja Kec. Cijeruk, Bogor Regency Prov. West Java.

3.3 Research Methods

This study employed the Borg & Gall development model as part of its R&D (Research and Development) methodology.

Borg and Gall in Wati & Sukmayasa (2024) "Research and information collecting, planning, develop preliminary form of product, preliminary field testing, main product revision, main field testing, operational product revision, operational field testing, final product revision, and dissemination and implementation" are the steps that need to be taken in this approach. Borg & Gall's conceptual model of the research and development method consists of ten broad steps:

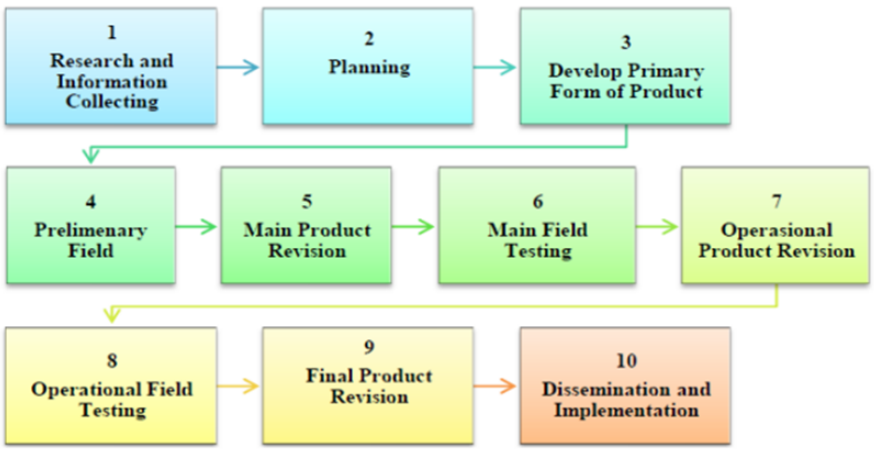

Figure 1. Borg & Gall Development Procedure Model

3.4 Data Collection Technique

The study's data were descriptively, qualitatively, and quantitatively examined.

4. RESULT AND DISCUSSION

4.1 Need Anaysis

According to the findings of the student questionnaire on learning objectives and challenges, it is known that students require more time to comprehend Nahwu subjects, that they become bored easily with Nahwu courses, and that they still lack motivation in learning the language. It is clear from the foregoing description that kids desire engaging media, a variety of activities, and media that keeps them from getting bored. The availability of learning resources based on Android is one way.

4.2 Material Analysis

The ideas of Khobar Muqoddam and Mubtada's Muakhkhor material, the flow of learning objectives, and learning objectives are the basis for the material analysis, which examines learning outcomes and learning objectives that make reference to the 2013 Curriculum.

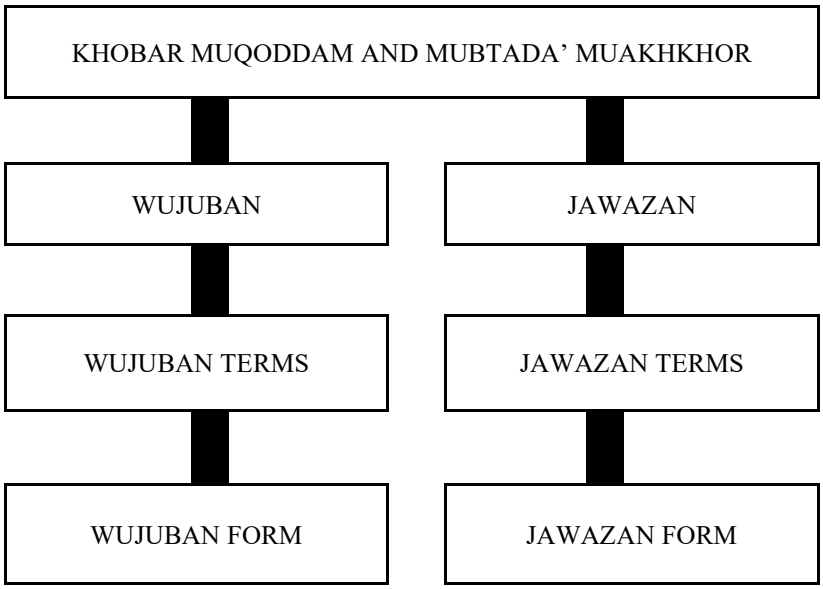

Figure 2. Material Map of Khobar Muqoddam and Mubtada' Muakhkhor

Following the creation of the khobar muqoddam mubtada' muakhor chapter of the nahwu learning media, a formative assessment is conducted under the guidance of an expert lecturer in order to enhance the android-based learning media product. The purpose of this method is to evaluate nahwu Learning Media's viability. Experts in media, learning design, linguistics, and material expertise validate the evaluation process. The concerned expert speaker is a doctor according to the standards of his profession.

The assessment moreover examines the reactions of educators and learners to the used materials. so that it might be more engaging for the following use.

4.3 Material Expert Validation

Table 1. Material Expert Validation Test Analysis Results

Test	Aspect	Score	Description
Material Expert	Content	89%	Decent
	Discussion	87%	Decent

Revisions to the data analysis of the material experts yielded an 88%, indicating that the use of learning media in nahwu class XI is possible.

4.4 Media Expert Validation

Table 2. Results of Media Expert Validation Test Analysis

Test	Aspect	Score	Description
Media Expert	Quality	95%	Very Decent
	Effectiveness	90%	Very Decent
	Graphics	90%	Very Decent
	Presentation	95%	Very Decent

With modification, the employment of learning media for nahwu class XI is viable, according to the data analysis of media specialists, which yielded results of 92%.

4.5 Design Expert Validation

Table 3. Analysis Results of Design Expert Validation Test

Test	Aspect	Score	Description
Design Expert	Learning	95%	Very Decent
	View	92%	Very Decent
	Language	93%	Very Decent

Based on the data analysis of instructional design experts obtained 93%, the use of learning media nahwu class XI is feasible to use with revision.

4.6 Langauge Expert Validation

Table 4. Analysis Results of Language Expert Validation Test

Test	Aspect	Score	Description
Language Expert	Language	80%	Decent
	Ethics	90%	Very Decent

It is possible to use learning media for Nahwu class XI with review, according to the data analysis of instructional design specialists, which produced outcomes of 85%.

Thus, it is possible to draw the following conclusions about the viability of an Android-based Nahwu Learning Media:

Table 5. Product Validation Results

Review	Average	Criteria	Description
Material	88%	Very Valid	Partial Revision
Media	92%	Very Valid	
Learning Design	93%	Very Valid	
Language	85%	Very Valid	

Thus, students may try the nahwu Learning Media app, which is based on Android.

4.7 Effectivenes Test

Table 6. Comparison Data of Student Pretest and Posttest Results

No	Test	Average
1	Pretest	46
2	Posttest	83

The t test is utilized to calculate learning results in order to ascertain their efficacy. Prior until now, though, the data was computed using a normalcy test.

4.8 Normality Test

To ascertain if the data is regularly distributed or not, the normalcy test is performed. The one-sample Kolmogorov-Smirnov test, which is used for this normality test using SPSS.22, is detailed in the following table:

Table 7. Normality Test

	Treatment	Kolgomorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Value	Pretest	.099	30	.200*	.949	30	.155
	Posttest	.160	30	.047	.892	30	.005

*. This is a lower bound of the true significance.
a. liliefors Significance Correction

The significant value is 0.2 > 0.05, as the normality test in the previous table makes clear. As a result, it's possible to draw the conclusion that either the assumption or the condition of normality has been met or that the data obtained is normally distributed.

4.9 Hypothesis Test

Researchers use hypothesis testing using the t test using SPSS. The process of testing a hypothesis involves comparing two variables: the capacity of students prior to utilizing learning media and students after using learning media.

H0: there is no difference in learning outcomes through android-based nahwu Learning Media

H1: there is a difference in learning outcomes through android-based nahwu Learning Media

Table 8. t Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest – Posttest	-36.633	23.052	4.209	-45.241	-28.025	-8.704	29	.000

It is clear from the data table above that there is a meaningful difference because the significance value is 0.000 <0.05. This indicates that the null hypothesis (H0)—that there is a true difference between the Nahwu learning results in the pretest and posttest data.

These findings demonstrate the efficacy of nahwu Learning Media's android-based application.

4. CONCLUSION

Based on the description and data analysis of the results of the research on the development of independent curriculum print modules for Pancasila Education class V subjects at Nurul Islam Elementary School, Cileungsi District, the following can be concluded:

1) The Borg and Gall model, which was combined with the Rowntree model utilizing three stages from the Rowntree model and ten steps from the Bord and Gall model, was used to build the development model.

2) Teacher users (94%), student users (94%), and media specialists (87%), who undertook a feasibility test, all came out with a "very viable" rating. These findings suggest that it is possible to enhance the learning outcomes of Pancasila Education fifth grade pupils at Nurul Islam Elementary School by using an autonomous curricular print module.

3) The examination of the data from the pretest and posttest reveals that the maximum average value is 20, the average value of the students' pretest is 55, and the average value of their posttest is 91. 0.8 with a high category or percented to 80 is the outcome of evaluating the efficacy using the N-Gain Score algorithm. Based on the conversion of the N-Gain score review results with a value of >76, which is considered effective, using the independent curriculum print module can enhance student learning outcomes in Pancasila Education subjects in class V SD Nurul Islam.

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