Android-based Al-qur'an application development and culture "Nggahi Mbojo"

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Article Info

ABSTRACT

To overcome AL-Qur'an illiteracy in TPQ students can us the Qiroati method, Iqro`,An Nahdliyah, Yanbu`a, and Tartili, but are not very effective. The learning model applied by Al-Qur`an teachers is currently less attractive because they are still using the old method they are used to learning to use "NggahiMbojo" in every Qur'an learning, this study aims to produce the Qur'an . `The Android-Based Application and Local Culture "NggahiMbojo" is of good quality with valid, practical and effective criteria. This research is a development research (Development Research) by developing learning tools that include, Al-Qur'an Learning Applications and IQRO Reading Ability Assessment Instruments, this research procedure refers to the 4-D model (Four D model) which is carried out on TPQ Santri total 40 people, in Pajo District, Dompu Regency in 2022, Data analysis in this study uses quantitative data analysis, through analysis of the validity of the device by experts, practicality analysis and analysis of the effectiveness of the device seen from student learning outcomes, the results of the analysis show that the learning tools used are of good quality with categories Valid, Practically effective for use in the process learning to read the Koran for students.

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Introduction

Science and technology have now developed, this is marked by advances in the field of media and information technology, even in the learning process, technology has played a very effective role as a learning tool for children (Dwiyudha Nugraha, Hanggara, Ameliola, 2010), various institutions such as schools and playgrounds have used information technology as a learning tool, including learning to recognize the letters of the Qur'an, in some examples, information technology has been applied in learning to know the Qur'an such as the use of voice recognition applications through Google Speech as a practice question for TPQ students in reading Hijaiyah letters, hijaiyah letters themselves are Arabic spelling letters as the original language of the Qur'an, it can be said that hijaiyah letters are like letters of the alphabet (A B C D E) in Indonesian, so they can read AL -The Qur'an must learn and understand the hijaiyah letters and their spellings used in In the Al-Qur'an there are 29 kinds and the number of hijaiyah letters includes Alif(Husaini, 2020), in addition (Muzakki et al., 2021)in his research said that the implementation of multimedia in learning Al-Qur'an Hadith was proven to be able to improve motivation, learning style, and activeness of students in following the learning process.

Prudence in learning to read the Qur'an has resulted in various learning methods, this is because the Al-Qur'an has various procedures in the process of reading it, including punctuation marks (harakat) which function to determine how to pronounce the hijaiyah letters in the Al-Qur'an. Qur'an. For example, if in Indonesian there is A I U E O, then in Arabic there is harakat(Muharom Albantani, 2019), another procedure in reading the Qur'an is to understand the recitation of tajwid. The science of recitation in the Qur'an is the science used to find out how to sound the letters of the Qur'an properly and correctly. Like being read aloud, vaguely or clearly (Hula et al., 2020), how to read the Qur'an there are lots of punctuation cues, for example Mad Arid Lissukun and Mad Mandatory Muttasil. Mad arid lissukun is when a mad letter meets one of the hijaiyah letters at the end of the sentence. (Leu, 2020), the many procedures and provisions in learning to read the Qur'an have stimulated researchers to innovate in training the abilities of their students, one of which is conducted by (Muhajirin & Ratnawati, 2016) who succeeded in increasing students' reading skills of the Qur'an through the use of information and communication technology, even during the previous pandemic (FAUZI, 2021) recommended various learning media that could be applied by teachers during the pandemic including are WhatsApp Group, PowerPoint, FastStone Capture, YouTube and Google Forms.

Based on a joint interview with the Head of Diniyah Education and Islamic Boarding School Regional Office of the Ministry of Islamic Religion in Dompu Regency related to the process and results of learning to read the Qur'an which was carried out at TPQ, Pajo District, he said that there were several obstacles faced by the Al-Qur'an learning park. Among them are students who seem less interested and enthusiastic in learning to read the Qur'an, this has an impact on the low learning outcomes of reading the Qur'an which quantitatively has not reached maximum completeness, namely 80% of students with the status of not being able to read the Qur'an. in accordance with the correct reading rules, broken down on the criteria of not knowing hijaiyah letters as much as 40%, the criteria for not knowing punctuation marks as much as 20% and the criteria for not knowing concatenated letters as much as 20%, This is usually because children feel bored with the adopted learning method by teachers who tend to ask students to recite one by one in front of the teacher, then the teacher u see and correct the reading of TPQ students. The difficulty of TPQ teachers in teaching the Koran because they have not found the right method to overcome these problems, especially in TPQ in Pajo District, thus teachers need to improve how to teach the Qur'an to TPQ students by presenting innovative learning media such as the use of installed applications. in smartphones, the application in question is also equipped with interactive learning media that is integrated with learning to read the Qur'an in the form of adding and introducing hijaiyah letters to students.

The adoption of local culture that is carried out in this study is the integration of the Bima language into the Android application used in learning the Qur'an, this form of integration presents the philosophy or characteristics of the Mbojo tribe who inhabit the eastern part of Sumbawa island as the indigenous Bima tribe (Mbojo Tribe). or douMbojo(Cookson & Stirk, 2019), the presence of this android-based Al-Qur'an learning application is expected to help students learn the Qur'an in a practical way. Moreover, this application is planned to be equipped with two forms of evaluation, this can motivate children to be disciplined, responsible and honest in learning. In addition, parental participation will be directly involved, both in terms of student control through learning outcomes and murāja'ah. Through the Android-based Al-Qur'an learning application, parents can easily monitor learning progress and teach the Qur'an to children anywhere. Thus, communication and collaboration between teachers and parents in dealing with problems faced by students will be well established, because of the shared responsibility to always monitor children's learning activities, especially in learning the Al-Quran.

Based on the background presented, the objectives of this study were formulated, namely: the existence of an Android application that is used to learn to read the Qur'an based on the local culture "NggahiMbojo" which is of good quality with valid, practical and effective criteria.

Method

This research is a development research that aims to develop an Android Application for Learning Al-Qur'an based on Local Culture "Nggahi Mbojo", which refers to the ADDIE development model consisting of Analyze, Design, Development, Implementation and Evaluation (Smith and Ragan, 1999) adopted from (Fathirma'ruf et al., 2021)

Figure 1. ADDIE Development Model

This research was carried out at the TPQ Al-IkhlasSantri, Rasabou Village in Pajo District, Dompu Regency in 2022 totaling 40 students, the selection of this sample was based on the consideration that the results of learning to read the Qur'an at the TPQ Al-IkhlasSantri quantitatively had not reached maximum completeness, namely 80% of students with the status of not being able to read the Qur'an in accordance with the correct reading rules, decomposed on the criteria of not knowing the hijaiyah letters as much as 40%, the criteria for not knowing punctuation marks as much as 20% and the criteria for not knowing concatenated letters as much as 20%, presented a product navigation design that will be developed in this study:
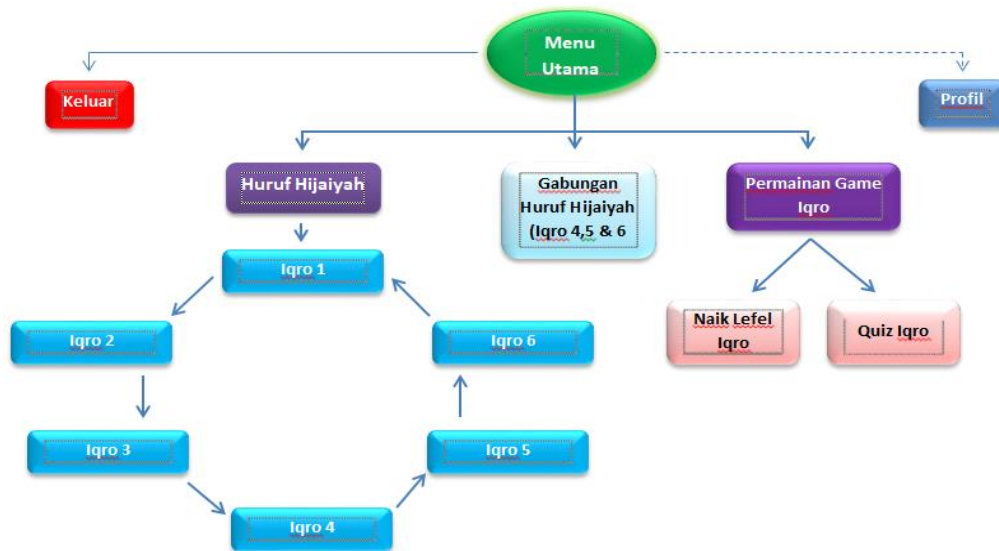

Figure 2. Product Navigation Design

Learning tools to read the Al-Qur'an based on the Local Culture "Nggahi Mbojo" which was developed according to the ADDIE development model which consists of Analysis: This stage is carried out to find out the results of learning to read the Qur'an of students, the needs and objectives of learning as well as the obstacles faced by the teacher in the implementation of learning, then the Design stage: which is the stage where the initial design related to the developed device is carried out, such as application design, expert validation instruments, learning outcomes test instruments, and student response questionnaires to learning, the third stage is the entire development stage the device that has been designed in the previous stage, and the last is the Evaluation stage, which is a stage that aims to provide conclusions related to the validity of the device, the practicality of the device, and the effectiveness of the device that has been developed.

Results and Discussions

Data Analysis Validation
Validation of Al-Quran Experts
Based on data analysis from Al-Qura'an learning experts, it can be concluded that the media developed is quite valid. This can be seen from the average obtained as a whole is 3.36. The application of the Qur'an in the regional culture-based "Nggahi Mbojo" is a very effective learning medium, especially for the Bima-Dompu

community, this is also based on the results of research (Aninditawidagda, 2014) which states that the method used in the translation of the Qur'an Javanese language is dominated by the interpretation of the Qur'an in Javanese language and tends to be reluctant to read it, so the researchers took the initiative to make it into an application form as a means to facilitate learning the translation of the Qur'an in Javanese using technology based on android mobile. is read only and contains the translation of the AL-Qur'an Juz 30 in Javanese equipped with audio and has been uploaded on the Play Store.

Table 1. Data Analysis of Iqro' Reading Expert Validation and cognitive ability tests of TPQ students using qualitative descriptive.

Aspect	Criteria	Validator			Average	Category
		1	**2**	**3**		
Contents	**a. Material Quality**					
	1. The material presented is in accordance with the learning standards and the age of the students	4	3	4	3,67	Valid
	2. The material presented is in accordance with the learning objectives to be achieved	3	4	4	3,67	Valid
	3. The material is presented in sequence	3	4	4	3,67	Valid
	4. The material presented is clear	4	3	4	3,67	Valid
	5. Giving examples according to the material presented	3	3	4	3,33	quite valid
	b. The quality of the students' reading ability of the Qur'an					
	1. The questions given are in accordance with the iqro' learning objectives	4	3	4	3,67	Valid
	2. The test questions given are in accordance with the material presented	3	3	4	3,33	quite valid
	3. The number of questions given is sufficient	3	3	3	3,00	quite valid
	4. Instructions for working on practice questions are clear	3	2	4	3,00	quite valid
Language	a. The instructions used are good and correct	4	2	4	3,33	quite valid
	b. The instructions used are in accordance with the target user	4	2	4	3,333	quite valid
	c. The instructions used are easy to understand	3	3	4	3,33	quite valid
Learning Design	a. The media developed is accompanied by a notification of the goals and competencies of students	3	3	4	3,33	quite valid
	b. The media developed is accompanied by clear instructions for use	3	2	3	2,67	quite valid
	c. The developed media can provide opportunities for students to interact	3	3	4	3,33	quite valid
Average Total		**3,33**	**2,87**	**3,87**	**3,36**	**quite valid**

The materials made in this application include the introduction of hijaiyah letters, introduction of punctuation marks, introduction of recitation, reading with iqro 1-6 and teaching in the form of the Bima-

Dompu regional language. This is in line with the results of the following research, regarding the four program activities owned by the Al Quran Nurul Huda Islamic Boarding School, namely 1) Madrasah Diniyah Salafiyah, tahfiz and memorizing the Qur'an (Ngindiana & M. Ali, 2014). In addition to the above materials, this Al-Qur'an learning application uses the Bima language, this is also in line with the works of interpretation written by commentators using one of the regional languages or Indonesian. The study of the Qur'an and its interpretation in Indonesia was pioneered by Abdur Rauf Singkel who translated the Qur'an (Tarjuman AL-Qur'an) into Malay in the mid XVII century. What has been done by Singkel was then continued by Munawar Chalil (Tafsir al-Qur'an Hidâyah al-Rahman), A. Hassan Bandung (al-Furqan, 1928), Mahmud Yunus (Tafsir al-Quran Indonesia, 1935), Hamka (Tafsir al- Azhar, 1973), Bisyri Mustafa Rembang (al-Ibriz, 1960). The last era of Tafsir Al-Qur'an is the work of Quraish Shihab. Quraish Shihab's model and system of interpretation: First, interpreting using the thematic method, this model work is contained in Grounding the Qur'an: Functions and Roles of Revelation in People's Lives (1992), Lentera Hati: Stories and Wisdom of Life (1994) and Insights Al-Qur'an (1996) and others. Second, the model interprets the entire Qur'an. This model work is then contained in his work Tafsir al-Mishbah: Message and Harmony of Al-Qur'an Verses(Ahmad Atabik, 2014).

Media Expert Validation

Tabel 2. Analisis Data Validasi ahli Media

No	Aspect	Validator			Average	Catagory
		1	2	3		
1	Layout (text and image layout) proportional	3	3	3	3,00	quite valid
2	The type of font used is appropriate	3	3	3	3,00	quite valid
3	The font size used is appropriate	3	3	3	3,00	quite valid
4	Use of proportional color	4	3	4	3,67	quite valid
5	Use of appropriate sound effects	3	3	4	3,33	quite valid
6	Use of appropriate animation	3	3	3	3,00	quite valid
7	The display settings are quite interesting	4	4	4	4,00	quite valid
8	Attractive button/navigator shape	3	3	3	3,00	quite valid
9	Consistent button display	4	4	4	4,00	Valid
10	Instructions in the developed media are simple and easy to operate	4	3	4	3,67	Valid
11	Interactive developed media	4	3	4	3,67	Valid
Average total		3,45	3,18	3,55	3,39	**quite valid**

Based on the analysis of data from media experts as a whole obtained an average of 3.39. This means that the developed media has met the criteria quite feasible, this data is in accordance with the results of research (Della & Huda, 2020) that the Al-Qur'an learning media application that can be used on Android smartphones by reading and listening to the letter readings according to its meaning and can be directly practiced using voice speech. The system development method used is the waterfall method. This application is built on the Android platform and implements speech recognition. The speech recognition algorithm used is divide and conquer to convert the voice into discrete forms so that speech recognition time synchronization occurs. The results of the application testing obtained a match between the algorithm and the design of the application that has been made in accordance with the design objectives.

The use of smart phones for purposes in several fields is developed with applications that are able to support their use, namely as educational learning media. The purpose of this study is to design and create an android-based mobile phone application as an application for learning the Qur'an and Hadith accompanied by examples of correct memorization accompanied by examples of writing, narration/reading. This interactive mobile application allows users to see examples and hear from the application used so that it can make it easier for students to understand the learning of the Qur'an and Hadith and can repeat it at home at any time. This application is designed using UML and the jQuery Mobile programming language with blackbox testing. This application can increase the interest of students in learning the Qur'an and Hadith (Hsy, 2022).

Practical Data Analysis
The practicality of the application data was obtained based on the response data of TPQ students obtained by using a questionnaire after the learning activities took place. Based on the data (Table 3), the percentage of TPQ students' responses is in the Positive category, namely 76.29% of the Android-based Al-Qur'an learning application and the regional culture of "NggahiMbojo", this is in accordance with the results of the study (Shodiq et al., 2021)said that application-based learning to read the Al-Quran using an interactive system can

increase children's interest in starting the early learning process. In addition, interactive games are an alternative in conveying learning for children at an early age to learn it because children at an early age have a fairly good understanding and memory. The method of learning and spreading Islam uses the concept of regional culture, through association and trade, friendly manners are always shown in everyday interactions. does not sharply oppose the religion and living beliefs of the indigenous people, but only shows the beauty and goodness brought by Islam. (Atsani, 2020).

Table 3. Results of TPQ's Student Response Questionnaire

No	Questions	Persentage (%)
1	The developed media makes it easy to operate	79,84
2	The material presented is clear and easy to follow	70,16
3	The sentences used in the questions are easy to understand	72,58
4	Selection of the type and size of letters (font) is interesting to read	74,19
5	Attractive media display	79,03
6	Interesting use of color and animated background	75
7	With media that is connected to the internet I feel happy/motivated to learn	76,61
8	With website-based media, I am interested in finding other supporting literature	75,81
9	Website-based media helps me in learning	79,03
10	With website-based media I can access learning materials anytime and anywhere without space and time limits	80,65
Average total		**76,29**

The developed Al-Qur'an learning application can be used anywhere and anytime. The content required by users can be accessed easily and is equipped with multimedia facilities that are able to combine text, images, and sound in one device. In this educational medium, the author makes an application to introduce the hijaiyah letter along with the sound of how to pronounce it, which is interesting so that early childhood is interested in learning the hijaiyah letter. This learning application that will be used for ages 3 to 9 years contains learning material for hijaiyah letters to exercises, (Gunawan, 2019).

Data Analysis of The Effectiveness Of AL-Qur'an Learning Applications
The assessment of the cognitive abilities of TPQ students was obtained from a test to understand the reading of the hijaiyah letters and the law of reading which refers to the assessment rubric and the ability to memorize reading procedures.

Table 4. Complete Learning of the Qur'an

No	Indicator	Presentage (%)
1	Understanding the hijaiyah letters and Al-Qur'an punctuation marks	95
2	Understanding the punctuation marks or harakat al-Qur`an	87,5
3	Understanding the recitation of tajwid Al-Qur'an	85
4	Understanding the signs of reading the Qur'an	75
5	Memorizing short verses	72,5
Average		**83**
Criteria		**Clear**

Based on the results of the android-based Qur'an learning mastery test results and the regional culture "NggahiMbojo" is in the complete category with a percentage of 83%, this is in accordance with the results of research (Sari et al., 2021) which shows that the application of the Qur'an Android-based software is in accordance with user needs and the average test results shared with users is 81.25%. The Smart Apps Creator application with Qalqalah material in the Al-Qur'an Hadith subject is in the valid category and feasible to be applied, based on (1) material experts in the good category by 80%, (2) media experts in the good category by 82%, (3) MTs teachers amounted to 88%, (4) the implementation of student activity learning and assessment after learning achieved very good results. It can be stated that the Android-based Qalqalah material learning application is valid, practical and effective and feasible to use as teaching material for the Al-Qur'an Hadith.

Conclusions

Based on the research objectives, the results of data analysis and discussion of the results of this study, it was concluded that the development of the android-based AL-Qur'an application and local culture "Nggahi Mbojo" was developed through the development stages, namely defining, including the student analysis stage,

material analysis, and objective analysis. learning, design, namely the development of an android-based Al-Quran application and local culture based on data analysis results, develop including validation, trials, and application revisions based on data from validation and trial results, and dissemination at this stage the activities carried out include seminars on results and publication of research journals. Based on the results of the validation assessment from Al-Qur'an learning experts, media experts, trials of several students, and trials of all TPQ students, the resulting learning media is categorized as good quality. This can be seen from the criteria that have been set, namely: valid according to Al-Qur'an learning experts, effective in the teaching and learning process of the Qur'an as evidenced by the results of data analysis of the ability to read Al-Qur'an students are in the category complete, and positively related to the response of students during teaching and learning activities of the Qur'an. Based on the results of this study, the researchers suggest to TPQ teachers in particular and religious teachers in general that the learning tools developed are suitable for use as an alternative for learning the Qur'an for TPQ students, so that students can continue to carry out the teaching and learning process without being limited by space. and time, the evaluation stage of learning using the android-based Al-Qur`an application and local culture "Nggahi Mbojo" still has to be done by the teacher face-to-face, so this application needs to be developed more effectively so that the evaluation process can be carried out without face-to-face, as well as response students towards the development of this media is very positive, so for further development can be done by adding learning media for other materials such as tartil or Tahsin AL-Qur'an.

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