

## Development Of Sindro Application In Tahsin Al-Quran Lecture

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### ABSTRACT

The Al-Quran tahsin course requires learning media to help students learn the science of tahsin. The need for learning media in the tahsin course can be answered by developing the android tahsin application (SINDRO). This study aimed to develop an android application in the Al-Quran tahsin course and determine the quality of the application's feasibility. The research method used is the research and development/R&D research method, the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). Based on these stages, it produces an android-based SINDRO application learning media (tahsin Android). The SINDRO application (Android tahsin) developed has gone through the validation stage by several experts and tahsin lecturers and is revised according to the assessment of experts and tahsin lecturers. Generally, the validation results from several experts and tahsin lecturers on the SINDRO application (android tahsin) are at a very decent qualification level. From media experts, the feasibility percentage for the SINDRO application (android tahsin) is 87.82%, for material experts are 83.63%, tahsin lecturers are 87.14%, and for small group trials the percentage of feasibility is 83.75%. So overall, the SINDRO application (android tahsin) developed has the predicate that it is very suitable to be used as a medium for learning tahsin. The application passes the software quality test based on usability quality aspects. The usability aspect resulted in an overall average of 6.02, so it passed the test in the "very feasible" category.

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## INTRODUCTION

The holy book of the Al-Quran must be read and studied by all Muslims because the Al-Quran is in Arabic and the Al-Quran there are instructions and guidelines for human life. Reading the Qur'an correctly and adequately is worship and gets a reward from Allah SWT, so every Muslim must read the Qur'an following tajwid. People who study the Al-Quran are not limited by age; everyone can learn it starting from children, teenagers, adults and the elderly. So every Muslim is obliged to read the Al-Quran, learn the science of tahsin, and practice it well according to the rules of tahsin science because someone cannot read well if he does not master the science of tahsin. According to the guidelines, tahsin is a technique for enhancing Al Qur'an recitation that encourages reflection and a lovely voice (Syaiful Romadhon et al., 2019). The science of tahsin is more or less the same as that of recitation. It is just that the science of recitation is more dominant in theory, while tahsin is in its application or practice.

The problem usually arises during the Tahsin Al-Quran course for lecturers is the lack of face-to-face meetings with students. Usually, the face-to-face time in the Tahsin Al-Quran course is only 12 meetings with a student number of around 20-30 people. The time for these 12 meetings is still not enough because students who are still wrong in recognizing the Hijaiyah letter reach 50% of the number of students in the class. This is also exacerbated by unequally increasing students' Al-Quran Tahsin abilities from each meeting. At the end of the lecture, students' tahsin abilities are still not good, and even students have not passed this course. In the interviews conducted with students who took Tahsin Al-Quran courses, many students complained that no teacher was at home to help them learn Tahsin Al-Quran. This problem is expected to be overcome with the help of appropriate learning media so that all students who take the Tahsin Al-Quran course can pass well. Al-Qur'an learning innovation is absolutely necessary to stimulate student motivation and create a pleasant atmosphere of learning (Mujib & Marhamah, 2020).

Learning media is a tool for teaching and learning processes, namely everything used to stimulate students' thoughts, feelings, attention, and abilities or skills to encourage the learning process for each student (student/student). Learning media can also be interpreted as tools (Malau et al., 2020; Sari & Setiawan, 2018), facilities, or intermediaries that can be used in the process of interaction that occurs between teachers and students to encourage the teaching and learning process to acquire knowledge, skills, and strengthen what has been learned, as well as to assist in achieving the quality learning objectives that have been set (Hillman et al., 1994; Pagga & Astuti, 2020; Widodo & Wahyudin, 2018). Learning media cannot be separated from teaching and learning activities in schools. Utilization of learning media in the form of creative and systematic efforts to create experiences to assist students' learning process (McDougall et al., 2018; Rohaeti et al., 2019). Learning media acts as a learning stimulant and can foster learning motivation so that students do not get bored quickly in following the learning process.

The word Tahsin comes from the word *حَسَّنَ - يَحْسِنُ - تحسِيناً*, which has the meaning of improving. To improve here means to improve the quality of one's reading of the Qur'an. Some call the term Tahsin by another name, namely Tajwid. These two words, in essence, both emphasize on the improvement of the recitation of the Qur'an; the recitation of the Qur'an consists of hijaiyyah letters that have rules in its pronunciation (Annuri, 2010; Rusyd, 2019). Everyone who reads the Qur'an must use the laws set in the science of tajwid. Each hijaiyyah letter has a makhraj and a right that must be given when reading it. In addition, each letter also has properties that must be met when the letter is sounded or pronounced (Syaifullah et al., 2022; Yuwan & Lestari, 2016).

Android is an operating system that is specifically designed for smartphones and tablets. The Android system uses Linux as the basis for its operating system. Linux is an operating system specifically designed for use on computers. Android is designed to be installed on touchscreen mobile devices, smartphones, or tablets (Halpern et al., 2015; Zhong et al., 2015). The result is that smartphone operating system is adjusted from low-end to high-end class specifications. The development of the Android system at this time is quite sharp (Aminah, 2022; Malau et al., 2020). Android is an open operating system (open source), which means that Google allows and frees any

party to develop the Android operating system. Even users can develop the Android system according to their wishes. The Android system has a storehouse of applications and games that can be downloaded, namely Google Playstore; users can download applications or games on the Google Play Store as much as they want by using smartphone devices with the Android system (Halpern et al., 2015; Kumar & Karthikeyan, 2019). It is unique that Android uses food names to distinguish the version of the launched android system.

Technological advances have penetrated various aspects of life and have even penetrated aspects of education. This technological progress can also be seen with Android-based smartphones in everyday life. Android is widely utilized among students; according to a poll performed among STAIN Gajah Putih Takengon students in 2019, 95 percent of STAIN Gajah Putih Takengon students had used Android-based smartphones in their activities, both at home and at work, while on campus. Many students using Android-based smartphones is considered an opportunity to answer problems in the Tahsin Al-Quran course by creating android-based learning media. The resulting android application will later act as a learning medium and a teacher learning Tahsin Al-Quran when students study alone at home. Based on the identification of the problem, so that this research aims to: (1) Produce SINDRO Application products (Tahsin Android) as a learning medium in the Al-Quran tahsin course at STAIN Gajah Putih Takengon; (2) Describe the quality of the feasibility of the SINDRO Application (Tahsin Android) which was developed as a learning medium; and (3) Knowing the usability of the SINDRO Application (Tahsin Android).

## RESEARCH METHODOLOGY

The type of research carried out by researchers in research and development (R&D) in the process of developing the SINDRO application (Tahsin Android), while in product trials in the field to determine the usability of the SINDRO application (Tahsin Android). The development model in the SINDRO (Tahsin Android) application used by the researcher is the ADDIE model development theory (Analysis, Design, Development, Implementation, Evaluation). Molenda and Reiser developed this model. The ADDIE model describes a systematic approach to instructional development (Molenda, 2003). In addition, the ADDIE model is a general learning model suitable for development research. The ADDIE method is helpful because it offers a systems-based, iterative training development strategy conducive to developing a learning environment based on feedback (Mayfield, 2011). When used in the development, this process is considered sequential and interactive.

The ADDIE model uses five stages or development steps which are presented in the following diagram:

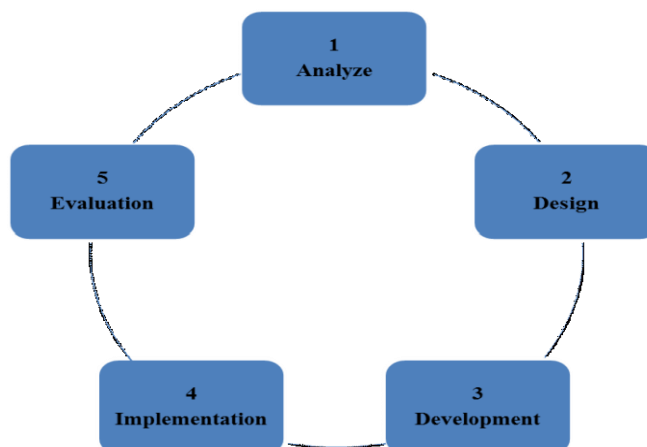


Figure 1. ADDIE Research Model Chart

## RESULTS AND DISCUSSIONS

## Analysis

Requirements analysis aims to define the overall function of the developed application. The functions needed in the development of Al-Qur'an than learning applications are as follows:

- a) Users can directly use the application to access tahsin Al-Qur'an materials.
- b) Users can directly use the application to access the information menu about the application (about).
- c) Users can directly use the application to access the application bar containing the about menu.
- d) Users can directly use the application to access introductory tahsin material, which includes: definitions, virtues, hijaiyah letters, harokat, basmalah and isti'adzah, and waqof.
- e) Users can directly use the application to access makhraj (letter exiting) materials which include: khalqi (throat), jauf (oral cavity), oral (tongue), syafatain (two lips), and khoisyum (nose cavity).
- f) Users can directly use the application to access the material of character traits, including opposite and non-opposite properties.
- g) Users can directly use the application to access mad material (short length), which consists of mad two harakat, 4-5 harakat, and mad six harakat.
- h) Users can directly use the application to access ghunnah (drone) material.
- i) Users can perform voice control on each selected sample of tahsin reading.
- j) Users can use the application to access online videos related to tahsin Al-Qur'an.

## Desain

The design stage is designing an interactive learning media framework that will be developed. Product design cannot be separated from the analysis of needs and problems. The product framework that is compiled as a guide for the development stages and implementation materials for application product trials, which includes:

### a) Compile the contents of the SINDRO Application Material

In terms of the material that will be presented in the SINDRO application (Android tahsin), based on the syllabus for the Tahsin Al-Qur'an course. However, in the presentation of material in the SINDRO (android tahsin) application, the researchers deliberately developed the media with material for all reading laws, the goal is that the SINDRO (android tahsin) application can be used for independent study at home, even the application will be able to be used by all students. Even though the material presented is outside the applicable curriculum, the SINDRO application (android tahsin) can still be used by students during PAI learning as additional learning material when PAI was learning recitation material. Researchers collect references or references that are relevant to the material of the recitation. Researchers used references from various sources, namely from the books of Ahmad Munir and Sudarsono (Science of Tajwid and the Art of Reading the Qur'an), and Ahmad Annuri (Guidelines for Tahsin Recitation of the Qur'an and the Science of Tajweed), and from M. Taufik's ebook (Summary of Tajwid Science), United Islamic Cultural Center Of Indonesia (Tajwid Qarabasy), and AW Publisher (Tajwid Lessons). The recitation material in the SINDRO application (tahsin android) includes (makharijul letters, waqaf, nun sukun & tanwin reading laws, mim sukun reading laws, mim and nun tasydid reading laws, and mad reading laws, ra reading laws, alif lam reading laws, the law of reading idgham, and the law of reading qalqalah).

### b) Designing the Design and Features of the SINDRO Application

The software used in developing the SINDRO (android tahsin) application is Android Studio, Adobe Illustrator CC 2017, Adobe Animate CC 2017, and Adobe Audition CC 2017. There is navigation to make it easier for researchers to design the design and content of the SINDRO (android tahsin) application that will be developed. Storyboards make it easier for programmers to transform into programming languages. Each process is described in the screen display design. The SINDRO (android tahsin) application on the background, fonts, logos and application buttons was designed

by researchers who were then interpreted in the form of the SINDRO (android tahsin) application by programmers who are experts in IT and graphics. The instrument compiled by the researcher is the SINDRO application assessment instrument (android tahsin) in the form of a questionnaire or application feasibility questionnaire for media experts, material experts, tahsin lecturers, application assessment by small group trial students. The questionnaire instrument measures the feasibility level of the SINDRO application (this android).

### Development

At this stage, the application creation process is carried out. The results of the development in this study are in the form of a SINDRO application (tahsin android) which was created using 4 main software, namely Android Studio, Adobe Animate Illustrator CC 2017, Adobe Animate CC 2017 and Adobe Audition CC 2017, which were then installed into APK format. The final product of android-based learning media is the SINDRO application (android tahsin), consisting of an intro page and a main menu/home page.

The intro view is the loading screen for the SINDRO application (android tahsin) when we open the application. In the intro view, there is a splash screen that says SINDRO (android tahsin), which gives an interesting impression and notifies users that the application is called SINDRO (android tahsin).



Figure 2. Intro page

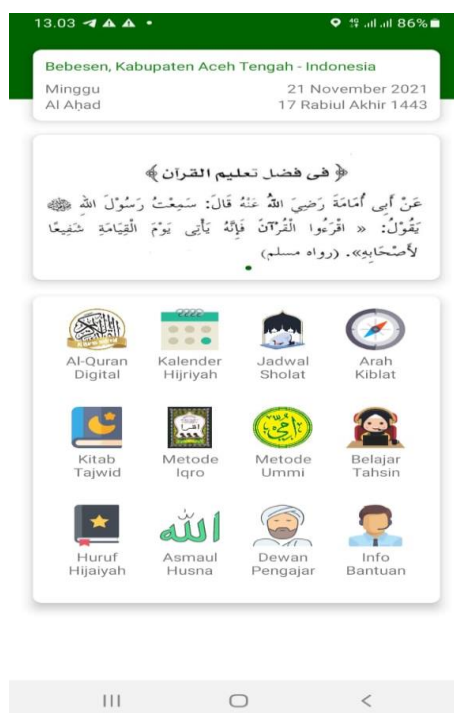


Figure 3. Display of the Home/Main Page

The results of the assessment of the three validators are:

#### a) Media Expert Validation

The feasibility test results by media experts indicate the quality of the developed application in terms of software engineering and visual communication aspects. Based on the results of the assessment from media experts as a whole, the average of all indicators got a score of 101, and the maximum score was 115 ( $101 \times 100:115 = 87.82\%$ ), based on the results of the percentage of eligibility, it was included in the Very Eligible category.

#### b) Material Expert Validation

The feasibility test results by material experts indicate the quality of the developed application in terms of three aspects, namely aspects of concept correctness, material preparation, and implementation potential. Based on the assessment results of the material experts, the average score of all indicators is 92, and the maximum score is 110 ( $92 \times 100:110 = 83.63\%$ ). Based on the results of the feasibility percentage, it is included in the Very Eligible category.

#### c) Tahsin Lecturer Validation

The feasibility test results by the tahsin lecturer showed the quality of the application developed in terms of the feasibility aspect of the SINDRO application (tahsin android) for use in learning. Based on the results of the overall assessment of the tahsin lecturers, the average score of all indicators was 122, and the maximum score was 140 ( $122 \times 100:140 = 87,14\%$ ). Based on validation from media experts, material experts and teachers, there are several revisions so that the SINDRO application (Android tahsin) is suitable for use; these revisions include the revision of the SINDRO application icon (android tahsin), audio revisions, revisions to the menu start page, revision of profile pages, material revisions, and improvements to the reading correction feature.

## Implementation (Implementasi)

### a) Small-Group Trial Analysis Results

Small group trials were conducted on students (not the class used for the study). The data from the small group trial were then analyzed and used to revise the second phase of the SINDRO (tahsin android) application before field trials were conducted. Based on the results of student assessments in the small group trial, the average of all indicators obtained a score of 335, and the maximum score was 400. It can be concluded that the overall percentage of the feasibility of the SINDRO application (tahsin android) is based on the assessment of 5 students in the small group trial, namely obtaining a score  $335 \times 100 : 400 = 83.75\%$ . Based on the results of the feasibility percentage, the feasibility level of the SINDRO application (tahsin android) assessment of 5 students in the small group trial at IAIN Takengon is included in the Very Eligible category.

### b) Usability Quality Analysis Results

The usability quality factor test was carried out using the CSUQ questionnaire method developed by J.R. Lewis. Questionnaires were given to 10 students of IAIN Takengon. Through the average results of usability testing based on all items, it can be concluded that this application is suitable for use as an application for learning the Qur'an tahsin. Overall usability test results reached an average of 6.02 with the "Very Eligible" category. Therefore, it can be concluded that the SINDRO application (tahsin android) has met the software quality rules regarding usability aspects.

## Evaluation

Based on the assessments of media experts, material experts, tahsin lecturers and students in small group trials, all of them stated that the Android-based SINDRO (tahsin android) application was in the Very Appropriate category and was suitable for use as a medium for learning tajwid students independently or at school.

## CONCLUSION

The development of SINDRO learning media (tahsin android) in this research and development refers to the ADDIE model development procedure, which consists of 5 stages: Analysis, Design, Development, Implementation, and Evaluation. Based on these stages, it produces an android-based SINDRO application learning media (tahsin Android). The SINDRO application (Android tahsin) developed has gone through the validation stage by several experts and tahsin lecturers and is revised according to the assessment of experts and tahsin lecturers. Generally, the validation results from several experts and tahsin lecturers on the SINDRO application (android tahsin) are at a very decent qualification level. For media experts, the feasibility percentage for the SINDRO application (android tahsin) is 87.82%, for material experts are 83.63%, tahsin lecturers are 87.14%, and small group trials, the percentage of feasibility is 83.75%. So overall, the SINDRO application (android tahsin) developed has the predicate that it is very suitable to be used as a medium for learning tahsin. The application passes the software quality test based on usability quality aspects. The usability aspect resulted in an overall average of 6.02, so it passed the test in the "very feasible" category.

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