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Development of Mobile Quran App with Screen Time Monitoring Using DRM, Agile, and Sus-Use Testing

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Abstract

The rapid growth of mobile applications has changed user behavior in the digital age, including how individuals interact with religious content. However, excessive use of social media has led to behavioral problems such as doom scrolling, zombie scrolling, and digital addiction, phenomena collectively known as "brain rot," which negatively impact cognitive, emotional, and spiritual well-being. This study aims to develop and evaluate Quran Break, a mobile Quran application that integrates screen time monitoring as a digital behavior intervention to encourage users to stop scrolling and engage in reading the Quran. The methodology applies the Design Research Methodology (DRM) through four iterative stages, supported by an Agile development model with short, adaptive sprints that enable continuous feedback and improvement. 18 participants were involved in usability testing using the System Usability Scale (SUS) and the Usability, Satisfaction, Ease of Learning, and Ease of Use (USE) questionnaire. The results showed that the application achieved an average SUS score of 75 (Good) and a USE score of 87.7% (Very Good), indicating that Quran Break is effective, useful, and easy to use. This discovery contributes to the fields of Religious Informatics and Human-Computer Interaction (HCI) by integrating persuasive technology into faith-based digital systems, supporting digital well-being, and promoting a balanced interaction between technology use and spiritual activities.

Keywords : *Digital Wellbeing, Mobile Quran Application, Screen Time Monitoring, SUS Usability, USE Questionnaire*

1. INTRODUCTION

Mobile applications are experiencing rapid growth and can be used for various purposes [1], [2]. According to the Digital 2025: Indonesia report, in early 2025 there will be 356 million active mobile connections, equivalent to 125% of the total population, although most connections are only used for SMS or voice call services. Meanwhile, the number of internet users reached 212 million people, about 74.6% of the population, and social media users reached 143 million, or 50.2% of the national population [3]. This data shows that the majority of Indonesians are now highly connected to digital technology, both through the internet and social media. However, this widespread penetration of technology also has an impact on digital behavior. Individuals of all ages who spend significant time in front of screens contribute to an increase in sedentary behavior and potential dangers to physical health, mental health [4], as well as negative impacts on relationships and responsibilities in real life [5].

Social media, which is becoming increasingly popular, plays an important role in facilitating interaction, disseminating information, and expressing opinions through various platforms such as Facebook, YouTube, Instagram, TikTok, WhatsApp, Messenger, and Telegram [6], [7]. However, one of the effects of excessive social media use is the phenomenon of brain rot [6]. Behaviors that trigger

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brain damage, such as doom scrolling (the compulsive act of scrolling through low-quality content from social media or news sites that focus on negative information), zombie scrolling (the habit of passively scrolling through social media or websites without a clear purpose, with very little meaningful interaction), and social media addiction, have a significant impact on mental health, emotional well-being, and the formation of one's self-concept [8], [9], [10]. Therefore, the main problem is not only the amount of time spent, but also the quality of uncontrolled device use [11]. One way to address this is by tracking screen time to become aware of unhealthy digital consumption patterns [12]. With increased awareness, users can more easily control the duration of device use and improve the quality of digital interactions to make them more productive and beneficial.

This phenomenon not only affects entertainment activities, but can also extend to religious activities, which are now often carried out through digital devices [13]. The Qur'an has a huge influence on the daily lives of Muslims because its teachings form the basis of their beliefs, behavior, and attitudes, and are studied, read, and memorized not only by scholars and preachers, but also by all levels of Muslim society [14]. The use of mobile applications can deepen understanding of the Qur'an and increase engagement, as these applications make learning more accessible and convenient, provide a variety of resources for exploring its teachings, and reflect the significant development of smartphones in supporting individual religious endeavors [1], [15]. Access to religious learning resources is now easier through digital Qur'ans, Islamic learning applications, and social media platforms that provide educational content that can be accessed anytime and anywhere [16]. However, the increase in the intensity of mobile phone use also poses new challenges in the form of “brain rot,” even in religious activities. Another study mentions that the higher the exposure to “brain rot,” the greater the risk of a person losing a balanced and moderate religious attitude [17]. Therefore, an innovative Quran application is needed that not only facilitates the learning process, but also helps users monitor and control the duration of their social media use.

In this context, the concept of digital wellbeing has emerged, which focuses on integrating and adjusting personal technology usage habits to align with the achievement of important goals in life [18]. Various media outlets have highlighted the negative impact of technology on human well-being, encouraging the HCI community to develop various efforts to support the creation of digital well-being in everyday life [19] To improve digital well-being, an effective starting point for intervention is to change factors directly related to the device itself, such as its settings [20], [21].

Innovations in Al-Qur'an-based applications have been developed in various previous studies with different focuses and technological approaches. Research by Akbar A, et al. [22] places greater emphasis on optimizing user interaction through voice-based reading and navigation systems, which allow users to access and control the reading of the Qur'an using voice commands. Meanwhile, Ridhoni I, et al. [23] developing a web-based Al-Qur'an application that utilizes REST API, and successfully displays all surahs and verses based on user selection. However, this research does not explicitly explain the testing and evaluation process, but rather focuses on the function of displaying Al-Qur'an data online.

Based on these findings, new innovations are needed in the form of Quran applications that not only focus on learning and reading, but also integrate screen time monitoring features as a form of digital behavior control for users. This feature is implemented by utilizing the UsageStatsManager API to monitor device activity in real-time [24]. In addition, usability testing is essential to ensure that the app can be used effectively by various groups, from teenagers to the elderly. Through this testing process, the app can be developed to truly meet user needs and support a balance between digital and spiritual activities. In fact, usability is cited as one of the main factors that greatly influence the success and acceptance of mobile apps by users [25]. Therefore, this study aims to develop and evaluate Quran Break using Design Research Methodology (DRM) and the Agile approach, as well as conducting usability

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testing using the System Usability Scale (SUS) and the Usability, Satisfaction, Ease of Learning, and Ease of Use (USE) questionnaire.

2. METHOD

2.1. Research Framework

The methodology used in this study is the Design Research Methodology (DRM) [26]. DRM is an approach developed to help researchers conduct design research in a structured and systematic manner [27]. The DRM framework consists of four main steps, namely research clarification, descriptive study 1, prescriptive study, and descriptive study 2 [28]. As shown in 0, this method is designed to provide a research framework that focuses on the structure of the development, testing, and internal evaluation processes in application development.

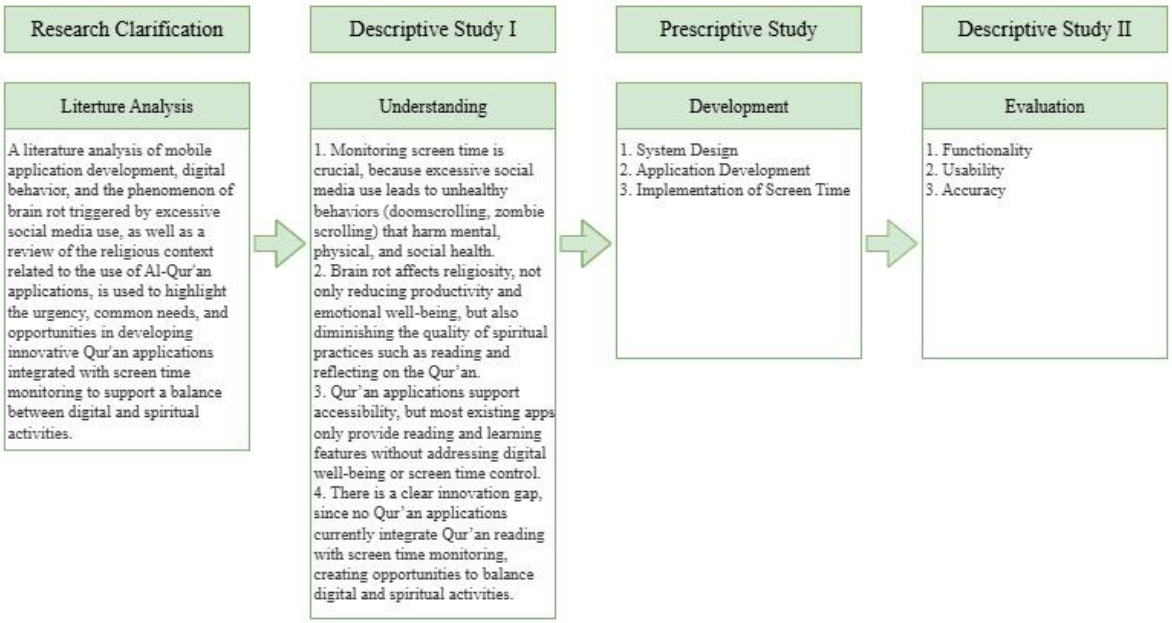

Figure 1. Research Design

In the Research Clarification (RC) stage, the main focus is to identify and clarify the issues underlying the application development. This stage aims to understand the urgency of the research and identify the research gap between the existing conditions and the required solutions. In the context of this research, RC was conducted through an analysis of literature related to mobile applications, digital behavior, and the phenomenon of brain rot, as well as a review of the religious context related to the Al-Qur'an application. The results of the analysis indicate the need for an Al-Qur'an application that integrates screen time monitoring features as a solution for digital and spiritual balance.

The Descriptive Study Phase I (DS-I) was conducted to review literature related to digital behavior, mobile application usage, and religious involvement as a conceptual basis for solution development. At this stage, emphasis was placed on the importance of screen time monitoring to address unhealthy digital habits, such as doom scrolling and zombie scrolling, which contribute to the phenomenon of brain rot and negatively impact physical, mental, and spiritual health. Brain rot also impacts religious aspects, with a decline in the quality of Quranic practices such as reading, listening, and reflecting on meaning. This review shows that although existing Quran applications provide accessibility and learning features, none integrate the dimension of digital wellbeing through screen time regulation. This analysis confirms the existence of an innovation gap, which opens up opportunities for

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the development of Quran applications with screen time monitoring features to support a balance between digital and religious activities.

As shown in 0, the tools used in architectural modeling, interface design, and application development are applied throughout the Prescriptive Study (PS) phase. This phase focuses on developing conceptual solutions that address the problems identified in the previous stage. First, system design is carried out, including application workflow design, user interface (UI/UX) design, and system architecture modeling to ensure consistency between functional and non-functional requirements. Second, the application development phase involves implementing the design using appropriate frameworks and programming languages. Third, a screen time monitoring feature is implemented to track the duration of social media application usage on smartphones, provide time notifications, and display usage statistics to users.

Table 1. Application Development Software

No	Component	Tool
1	System Architecture	Draw.io
2	Interface Design	Figma
3	Application Developer	Visual Studio Code
4	Programming Language	Dart, Kotlin
5	Database	MySQL

The Descriptive Study Phase II (DS-II) was then conducted to evaluate the results of the implementation developed in the prescriptive phase. This evaluation aimed to assess the extent to which the developed application met the research objectives through three main aspects, namely functionality, usability, and system accuracy. The functional evaluation was carried out using a black box testing approach to ensure that all application features, such as the Al-Qur'an audio player and screen time monitoring, ran according to design without errors. Before usability testing was conducted with external users, the author first conducted an internal usability evaluation to identify potential problems with the interface and navigation. This stage provided an opportunity to refine the appearance and interaction flow before conducting a formal evaluation with users.

Next, usability evaluation was conducted in two stages. The first stage was testing using the System Usability Scale (SUS) instrument, which involved external users to assess the level of ease, comfort, and their experience in using the application. The second stage is testing using the USE Questionnaire, which provides a more detailed description of the usability aspects of the application. The answers from the questionnaire are then calculated using a predetermined formula to obtain an overall score for each respondent. Meanwhile, accuracy evaluation focused on the system's accuracy in recording and displaying smartphone usage time while ensuring that users remained within the application.

2.2. Application Development Model

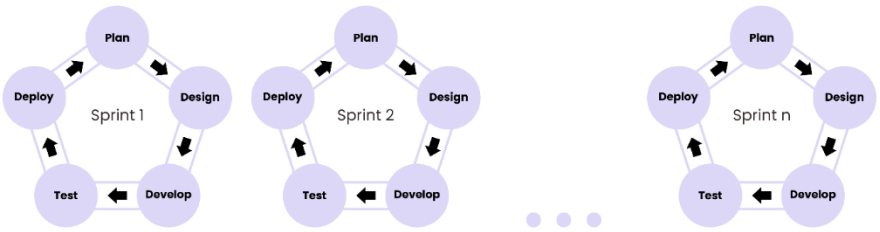

Figure 2. Agile Model

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As a measure to strengthen the application of the DRM research method, especially in the prescriptive study and descriptive study 2 stages with application-based results, an adaptive and proven development framework is used [28]. In this study, the Agile development model was chosen, as shown in 0. Agile is a software development approach that is carried out repeatedly in short cycles, allowing for continuous evaluation, feedback, and system improvements throughout the development process [29].

2.3. Data Collection

In this study, data collection was conducted through several methods to obtain the information needed for the development of the Quran Break application and as a basis for developing screen time monitoring and religious engagement features.

2.3.1. Literature Review

Collecting information from books, journal articles, and previous research related to digital behavior (screen time, doom scrolling, zombie scrolling), the phenomenon of "brain rot," and the use of Al-Qur'an applications. This data is used to identify innovation gaps and formulate concepts for integrating screen time monitoring and spiritual engagement in the Quran Break application.

2.3.2. Questionnaires

Respondents filled out a questionnaire about their social media usage habits, screen time, and its impact on their Al-Qur'an reading activities. The questionnaire also covered their preferences regarding Al-Qur'an application features. Each respondent was given a unique ID to maintain anonymity, without recording personal data such as name, address, or telephone number.

2.3.3. User Observation and Interaction

Observations were conducted to understand how users interact with existing Quran applications, as well as to identify their obstacles and needs. This information was used to refine the design of Quran Break's key features, the application's usage flow, and strategies for implementing effective screen time monitoring.

2.4. Usability Evaluation Design

In this study, the instruments used were the System Usability Scale (SUS) and the USE Questionnaire. SUS was used because it has been widely applied to assess the usability of applications on iOS and Android-based smartphones and tablets [30]. Meanwhile, the USE Questionnaire is used because the parameters in this method are used to assess the extent to which a product or application can help users achieve their goals and how easy and convenient the application interface is to use [31].

2.4.1. System Usability Scale (SUS)

The method for calculating the SUS score can be expressed as formula (1) [32]. The assessment categories are defined as Excellent, Good, Fair, and Poor, corresponding to scores above 80, 70–80, 50–70, and below 50, respectively [33].

$$SUS\ Score\ for\ Each\ Respondent = ((R1 - 1) + (5 - R2) + (R3 - 1) + (5 - R4) + (R5 - 1) + (5 - R6) + (R7 - 1) + (5 - R8) + (R9 - 1) + (5 - R10)) * 2.5) \quad (1)$$

2.4.2. USE Questionnaire

Based on 0, the results of testing with the USE Questionnaire show a more detailed explanation through four main elements, namely usefulness, ease of use, ease of learning, and satisfaction [34]. Data

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was collected through a 1–5 Likert scale questionnaire, consisting of strongly disagree (SD), disagree (D), undecided (U), agree (A), and strongly agree (SA), where each option represented the respondent's level of agreement with the given statement [35].

Table 2. USE Questionnaire Statement List

Factor	No	Statement
Usefulness	1	Q1: Quran Break helps me reduce the excessive time I spend on social media.
	2	Q2: Quran Break helps me read the Quran more often.
	3	Q3: Quran Break is useful for increasing my daily productivity.
	4	Q4: Quran Break is relevant to my need to manage screen time.
Ease of Use	1	Q5: Quran Break is easy to use without complicated instructions.
	2	Q6: The features in Quran Break are clear and easy to understand.
	3	Q7: The Quran Break interface is simple and easy to use.
Ease of Learning	1	Q8: I quickly got used to using Quran Break.
	2	Q9: I can understand how Quran Break works with a little explanation.
	3	Q10: The Quran Break menu and features are clearly organized so they are easy to understand.
Satisfaction	1	Q11: I am satisfied with Quran Break.
	2	Q12: Quran Break meets my expectations.
	3	Q13: I would recommend Quran Break to others.
	4	Q14: I feel Quran Break to be an interesting and useful application.

2.4.3. Validity and Reliability Testing

After all statements in the USE questionnaire have been compiled, the next step is to measure the suitability of the instrument through validity and reliability tests. These tests are conducted to ensure that each item in the USE Questionnaire accurately measures the intended aspect of usefulness and produces consistent data.

Table 3. Questionnaire Validity Test Results

Statement	Correlation (R Count)	R Table	Decision
Q1	0.640	0.468	Valid
Q2	0.778	0.468	Valid
Q3	0.786	0.468	Valid
Q4	0.835	0.468	Valid
Q5	0.739	0.468	Valid
Q6	0.673	0.468	Valid
Q7	0.541	0.468	Valid
Q8	0.848	0.468	Valid
Q9	0.709	0.468	Valid
Q10	0.710	0.468	Valid
Q11	0.809	0.468	Valid
Q12	0.873	0.468	Valid
Q13	0.615	0.468	Valid
Q14	0.556	0.468	Valid

The validity of the instrument was tested using Pearson's product-moment correlation formula, which aims to assess the extent to which each statement item has a significant relationship with the total

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questionnaire score. Meanwhile, the reliability of the instrument was analyzed using Cronbach's Alpha coefficient to measure the level of internal consistency between statement items [36]. The Cronbach's Alpha coefficient value was used as the main indicator of reliability. If the correlation value was in the range of 0.6 to 1.0, the instrument was considered to have a high level of reliability. Conversely, if the correlation value is below 0.5, the relationship between items is classified as weak, and the instrument is considered unreliable [37]. Data analysis in this study was performed using SPSS software, which serves as a powerful statistical tool for comprehensive data processing and analysis [38].

The results of the questionnaire validity test are presented in 0, which shows that all statement items have a correlation value (r count) greater than the table r value of 0.468 (based on 18 respondents). Thus, all statement items are declared valid and suitable for use in further analysis.

Next, a reliability test was conducted to assess the level of consistency between items in the questionnaire instrument. This test aimed to ensure that each statement provided stable and reliable results when used in similar conditions. The reliability results of the USE questionnaire can be seen in 0.

Reliability Statistics

Cronbach's Alpha	N of Items
,924	14

Figure 3. Reliability Test Results

After the instrument was declared valid and reliable, the next step was to analyze the usability questionnaire results collected from respondents to determine the feasibility of the application. This analysis aimed to assess the extent to which the Quran Break application met usability aspects based on four main factors in the USE Questionnaire. Data from the questionnaire was then summarized to obtain an average score for each statement on each factor.

2.4.4. Eligibility Category

The determination of the eligibility category for each aspect is done using an interval formula [39]. This formula is used to determine the range of values in each category by dividing the maximum percentage value, which is 100, by the number of Likert scales used.

$$Interval = \frac{100}{Likert\ Scale} = \frac{100}{5} = 20 \qquad (2)$$

Based on formula (2), a table of eligibility categories was obtained, showing the range of values for each level of eligibility, from highly ineligible to highly eligible. This table helps to interpret the assessment results in a more structured and systematic manner, as shown in 0.

Table 4. USE Questionnaire Score Categories

No	Value	Result
1	1 – 20	Very Bad
2	21 – 40	Bad
3	41 – 60	Enough
4	61 – 80	Good
5	81 – 100	Very Good

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Once the eligibility categories have been determined, the next step is formula (3), which is used to calculate the eligibility percentage for each aspect evaluated. This calculation is used to determine the eligibility level based on the observation results compared to the expected maximum value.

$$Eligibility\ Percentage = \frac{Respondent\ Score}{Expected\ Score} \qquad (3)$$

2.5. System Workflow

Based on the workflow system shown in 0, the comprehensive workflow of the Quran Break application illustrates the integration between high-level system permissions, background monitoring, and behavior diversion mechanisms designed to regulate digital usage and encourage interaction with the Qur'an.

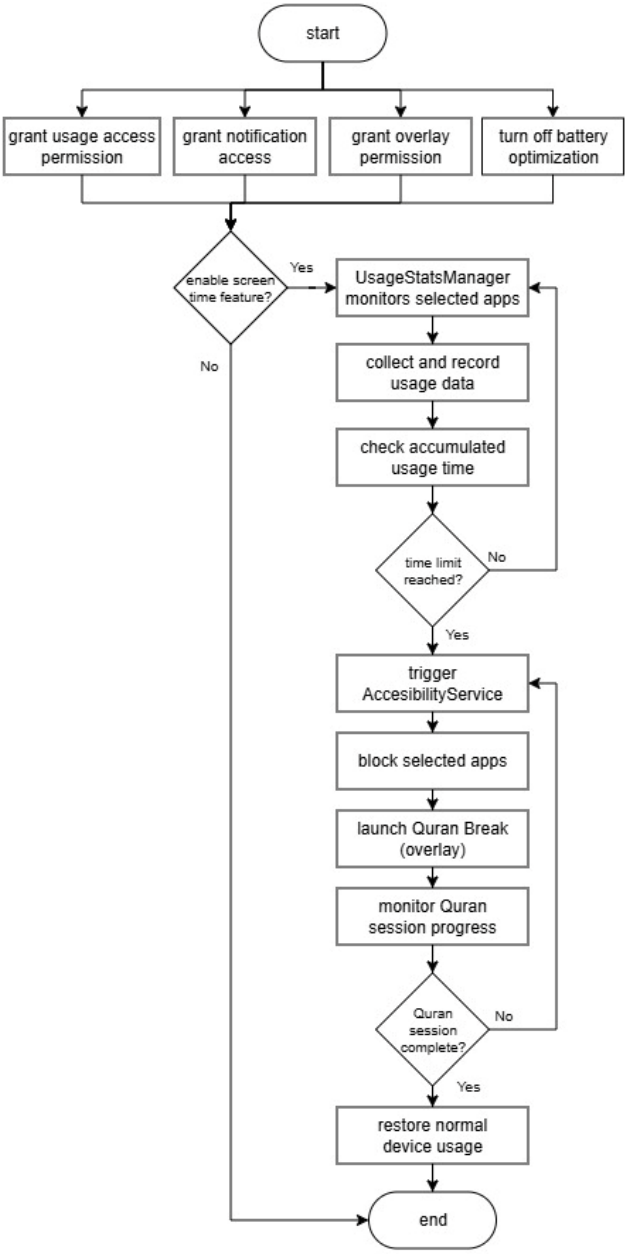

Figure 4. System Workflow

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The process begins with the system initialization stage, where the application requests several important permissions from the user, including: (1) Usage Access Permission, which allows the application to monitor the duration and activity of selected applications using UsageStatsManager, (2) Notification Access Permission, which allows the application to detect usage events and user interactions through notification triggers, (3) Overlay Permission, which allows the application to display the Quran Break interface as an overlay on top of other applications, and (4) Battery Optimization Exception, ensuring that the monitoring service remains active and is not affected by the system's power saving policy.

Once these permissions are granted, the system checks whether the user has enabled the screen time monitoring feature. If enabled, UsageStatsManager continuously monitors user activity in selected social media apps. The system collects and records the total accumulated usage time for each app monitored in the background. When the accumulated time reaches a predetermined limit, the system triggers AccessibilityService, which acts as a control layer to block access to selected social media applications. This mechanism acts as a digital boundary, preventing users from exceeding the time limits they have set for themselves.

As soon as this restriction is applied, the system launches the Quran Break interface through an overlay mechanism. This stage serves as a behavioral intervention designed to divert users' attention from excessive scrolling to spiritually enriching activities, such as reading or listening to verses from the Quran. During the Quran Break session, the system continuously monitors the progress and completion of the session. Once the session duration is fulfilled, the device automatically returns to normal usage mode, allowing access to previously restricted applications.

3. RESULT

This section presents the results of the research and implementation of the Quran Break application. The results presented cover several aspects, namely user requirements analysis, system design, functional testing, and usability testing. Functional testing used the black box testing method to ensure that each feature functioned according to the design, while usability testing used the System Usability Scale (SUS) and USE Questionnaire instruments to assess the level of ease, usability, and user satisfaction in using the Quran Break application.

3.1. User Requirements Analysis

The initial survey involved 124 respondents from two age groups, namely 17–35 years old and above 35 years old. The survey results show that most respondents use social media for 3–4 hours per day, with the most frequently accessed platforms being WhatsApp, YouTube, Instagram, TikTok, and Facebook. This pattern illustrates the high intensity of social media use, which has the potential to disrupt the balance of daily activities, including the routine of reading the Qur'an, as well as limited free time and decreased spiritual motivation.

The 17–35 age group tends to have a lower intensity of reading the Qur'an compared to the over-35 age group. Barriers that often arise in the younger age group include busy schedules due to college or work, high digital distractions, and a lack of spiritual motivation. Conversely, the older age group shows more consistent Qur'an reading habits, indicating a correlation between age and religious discipline. However, the younger generation has a higher level of technological adaptation, giving them the potential to more quickly accept digital solutions that support religious activities.

Most respondents also expressed interest in applications that can help control digital activities so that they do not interfere with reading the Qur'an. The most relevant features are reminder systems or screen time limits that can divert users' attention from social media to spiritual activities. These results

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confirm the need for digital solutions that not only facilitate access to the Qur'an, but also support a balance between technology use and daily worship habits.

3.2. System Design

The application interface is designed with a simple, intuitive, and easy-to-use display, allowing users to quickly and efficiently understand the functions of each feature. The application display begins with a main page that serves as a navigation center for various key features. The core feature of this application is to limit the use of other applications, which helps users control the duration of social media use and redirects them to read the Qur'an. In addition, there is a feature that monitors application usage time, which displays statistical data on the duration of device usage on a daily, weekly, and monthly basis. This application is also equipped with a number of supporting features, such as surah information, audio playback of surahs and verses from the Qur'an, translation display, and text storage and copying, which allow users to access and reuse them as needed. The overall appearance and interface features of the application can be seen in 0.

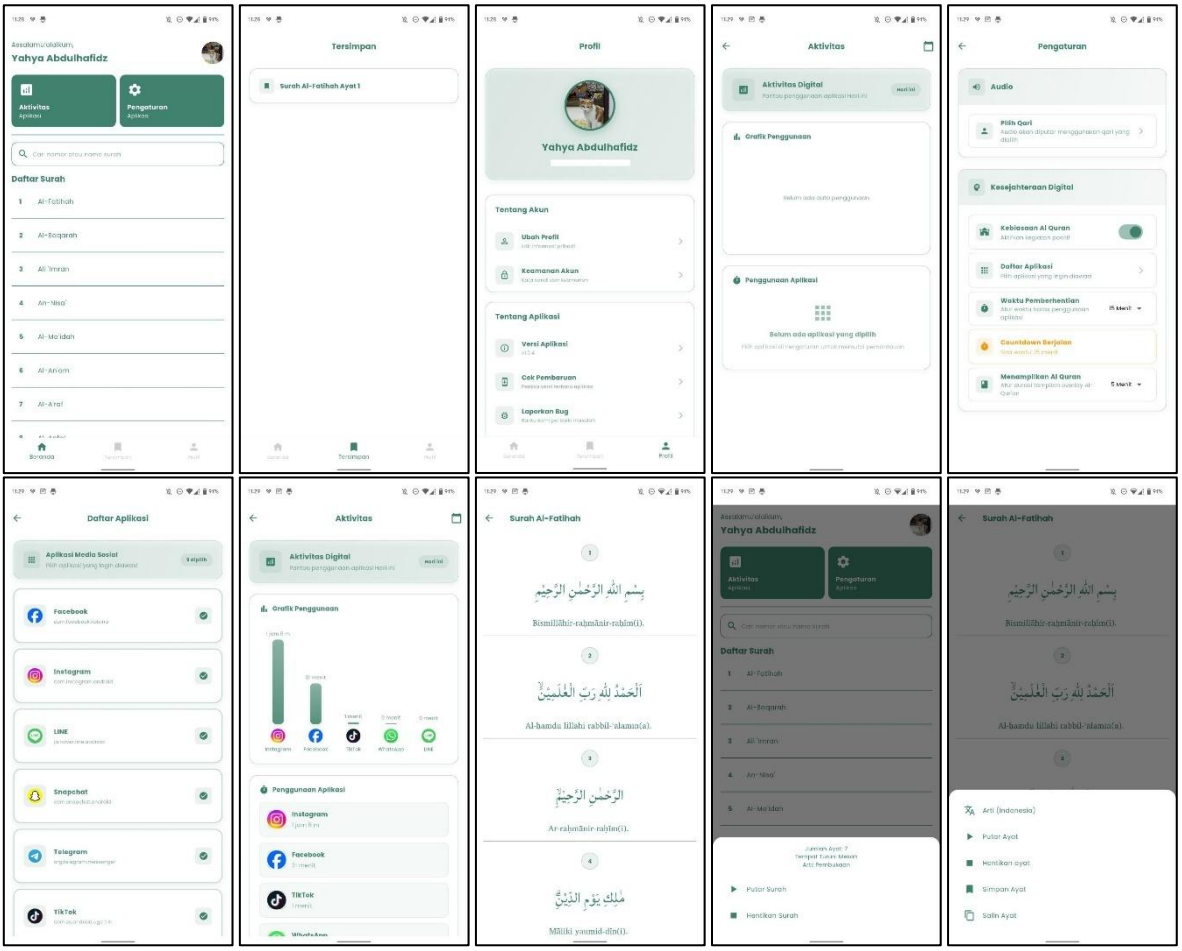

Figure 5. Application User Interface

3.3. Functional Testing

Quran Break application testing was conducted to ensure that the features functioned as designed. The method used was black box testing, an approach that assesses software functionality based on specifications without regard to source code, but rather by comparing system output to given input [40]. The test results showed that all features worked successfully as designed. However, to ensure that the Quran Break application could be used properly by a wide range of users, usability testing involving

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external users was also conducted. Feedback from this testing was important because it could expose minor issues that might not be apparent to the author, while also providing a basis for improving the quality of the application and user experience. A summary of the black box test results is shown in 0, which contains test cases, initial conditions, scenarios, test results, and conclusions.

Table 5. Application Testing Results

No	Test Case	Initial Condition	Scenario	Test Result	Conclusion
1	Login	Account already registered.	The user enters a valid email address and password, then logs in.	Login system to the main page.	Success
2	Activate Quran Habit Feature	Logged-in users.	The user activates the feature.	Active and running features are automatically disabled when user log out.	Success
3	Social Media App Selection	Active habit feature.	Users select social media apps from a list.	The selected apps are recorded in the system.	Success
4	Usage Duration Statistics	Selected application.	User opens daily/weekly/monthly statistics menu.	Statistics displayed according to usage.	Success
5	Set Time Limit	Active habit feature.	User sets time limit.	System saves time settings.	Success
6	Directed to the Quran Break app	Time's up.	The user attempts to open the selected social media application.	Users are directed to the application.	Success
7	Displaying Verses from the Quran	Logged-in users.	The user selects one of the letters.	The verses are displayed according to the API data.	Success
8	Audio Quran & Change Qari	The verse appeared on the screen.	The user presses the play button or selects another player.	The audio plays and changes according to the reader.	Success
9	Verse Information	The verse appeared on the screen.	The user presses the verse number.	The system displays the meaning of the verse.	Success
10	Save Verse	The verse appeared on the screen.	The user presses the Save button, then opens the Favorites menu.	Verses are saved.	Success

3.4. Usability Testing

After the functional testing phase ensures that all application features function according to design, the next step is to evaluate ease of use from the user's perspective. This trial involves a number of respondents who voluntarily use the application through a convenience sampling method. This

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method describes the process of collecting data from a research population that is easily accessible to researchers [41]. The number of participants was determined by considering time constraints, resources, and access to potential users.

3.4.1. Respondent Demographics

Understanding this demographic helps ensure that the usability test results analysis reflects user diversity more representatively. A complete overview of the respondent demographics can be seen in 0.

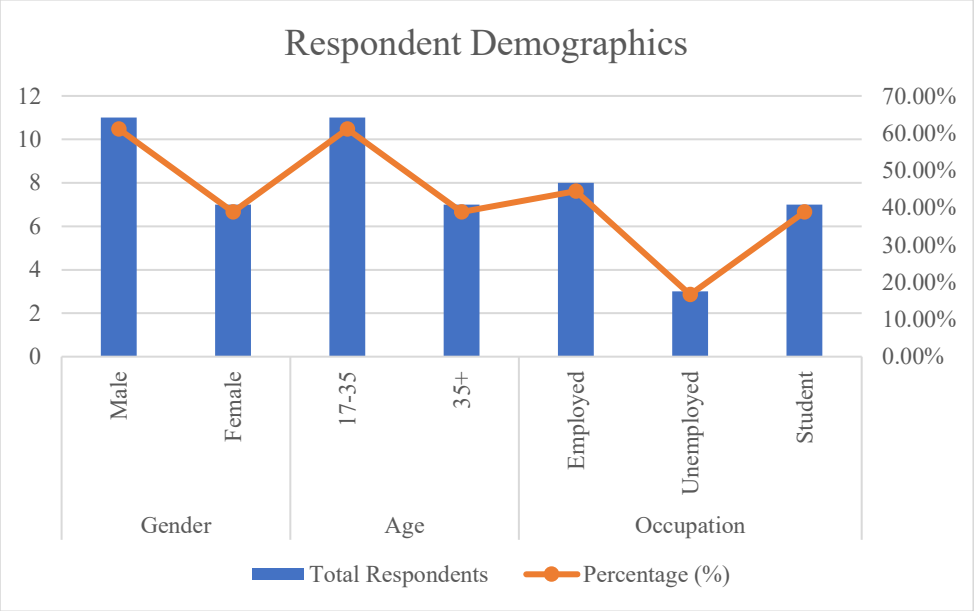

Figure 6. Respondent Demographics in the Usability Test

The majority of respondents were male, accounting for 55 percent, while female respondents accounted for 45 percent, indicating a fairly balanced gender distribution. In terms of age, most respondents were between 17 and 35 years old, representing 55 percent of the total sample and categorized as young adults who are generally active users of mobile technology. Respondents aged 35 and above made up the remaining 45 percent, ensuring a wider age range in the research sample. With regard to employment status, 40 percent of respondents were employed, 20 percent were unemployed, and 40 percent were students. This distribution reflects the diversity of respondents' daily activities and productivity levels, which may influence their interaction patterns with the application. Demographic variations based on gender, age, and employment contribute to a more comprehensive understanding of users' experiences and their perceptions of the ease of use of the Quran Break application.

3.4.2. SUS Assessment Results

Functional testing can ensure that the system operates properly under controlled conditions, but it does not provide a comprehensive picture of the extent to which the application can be understood, is practical to use, and provides satisfaction to users when interacting directly. In practice, the SUS score is calculated using Microsoft Excel, following the official calculation rules [42]. A summary of the SUS calculation results is presented in 0.

The results in 0 show the Final Scores obtained from 18 respondents with an average score of 75. Based on the SUS assessment category, a score of 75 falls into the “Good” category and is above the 70 threshold, which means that the Quran Break application has a good level of usability and is acceptable to users. This score indicates that most users find this application easy to use, has a clear navigation flow, and provides a pleasant interactive experience without causing confusion.

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Table 6. SUS Score Calculation

ID Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total Score	Final Score (*2.5)
U001	4	2	4	2	4	2	4	2	4	2	30	75
U002	4	2	4	2	4	2	4	2	4	4	28	70
U003	4	2	4	2	3	2	3	2	4	2	28	70
U004	3	2	4	2	4	3	4	2	4	3	27	67.5
U005	4	2	5	2	5	2	5	2	5	4	32	80
U006	3	2	4	1	4	3	4	2	4	3	28	70
U007	5	2	4	5	4	2	1	3	5	5	22	55
U008	4	4	4	2	4	2	4	2	4	4	26	65
U009	5	1	5	1	5	1	4	1	5	2	38	95
U010	5	2	4	2	5	2	4	2	4	2	32	80
U011	5	2	5	1	5	2	5	2	5	4	34	85
U012	5	1	5	1	5	1	5	1	5	1	40	100
U013	4	2	4	1	4	2	4	2	4	2	31	77.5
U014	4	2	4	1	4	2	4	1	4	3	31	77.5
U015	4	2	4	2	4	2	4	2	4	4	28	70
U016	4	2	5	3	4	4	4	2	5	4	27	67.5
U017	4	1	5	1	5	1	4	1	4	2	36	90
U018	4	4	4	2	4	4	4	3	3	4	22	55
Average Score												75

In addition, to gain a more comprehensive understanding of the usability dimension, including ease of use, ease of learning, and user satisfaction, a follow-up evaluation was conducted using the USE Questionnaire instrument to reinforce the SUS test results.

3.4.3. USE Questionnaire Results

Based on the recapitulation results in 0, a more comprehensive calculation of the application's usability can be done using the USE Questionnaire calculation formula. This calculation converts the average score for each factor into a percentage value, thus providing a more quantitative picture of the application's usability.

The values in 0 show the results of measuring the usability of the Quran Break application based on four main factors in the USE Questionnaire. The Usefulness factor scored 87.78%, indicating that this application is considered very useful and relevant to user needs, in line with the application's development objective of helping users reduce their doom scrolling habits and switch to positive activities such as reading the Qur'an. This percentage proves that the features provided have provided tangible benefits in supporting a balance between digital and spiritual activities. The Ease of Use factor scored 85.93%, indicating that the application is easy to use and has an intuitive interface. The Ease of Learning factor scored 87.41%, indicating that users can quickly understand the application's functions without significant difficulty. Meanwhile, the Satisfaction factor received the highest score of 89.17%, indicating that most respondents were satisfied with their overall experience using the application. Overall, the average usability score reached 87.70%, which is classified as very good, proving that the Quran Break application not only fulfills its functional aspects but also provides psychological and spiritual benefits in line with the application's development objectives.

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Table 7. USE Questionnaire Recapitulation Results

Factor	No	Statement	Value
Usefulness	1	Q1: Quran Break helps me reduce the excessive time I spend on social media.	4.44
	2	Q2: Quran Break helps me read the Quran more often.	4.44
	3	Q3: Quran Break is useful for increasing my daily productivity.	4.22
	4	Q4: Quran Break is relevant to my need to manage screen time.	4.44
		TOTAL Usefulness	17.56
Ease of Use	1	Q5: Quran Break is easy to use without complicated instructions.	4.17
	2	Q6: The features in Quran Break are clear and easy to understand.	4.50
	3	Q7: The Quran Break interface is simple and easy to use.	4.22
		TOTAL Ease of Use	12.89
Ease of Learning	1	Q8: I quickly got used to using Quran Break.	4.33
	2	Q9: I can understand how Quran Break works with a little explanation.	4.33
	3	Q10: The Quran Break menu and features are clearly organized so they are easy to understand.	4.44
		TOTAL Ease of Learning	13.11
Satisfaction	1	Q11: I am satisfied with Quran Break.	4.50
	2	Q12: Quran Break meets my expectations.	4.22
	3	Q13: I would recommend Quran Break to others.	4.56
	4	Q14: I feel Quran Break to be an interesting and useful application.	4.56
		TOTAL Satisfaction	17.83
		TOTAL OF ALL FACTORS	61.39

Table 8. USE Questionnaire Calculation Results

Factor	Usefulness	Ease of Use	Ease of Learning	Satisfaction	All Factors
Result	87.78%	85.93%	87.41%	89.17%	87.70%

4. DISCUSSIONS

4.1. Comparison with Previous Research

As summarized in 0, a comparative analysis of the three studies shows different focuses and technological approaches in the development of Al-Qur'an-based applications. The study conducted by Akbar A, et al. [22] primarily emphasizes the optimization of user interaction through a voice-based reading and navigation system, which allows users to access and control the reading of the Al-Qur'an through voice commands. This approach achieved a 90% accuracy rate in voice recognition, demonstrating its superiority in terms of accessibility and user convenience. Meanwhile, Ridhoni I, et al. [23] developed a web-based Al-Qur'an application that utilizes REST API, successfully displaying all surahs and verses based on user selection. However, this study does not explicitly explain the testing and evaluation process, focusing more on the functionality of displaying Al-Qur'an data online.

In contrast, the Quran Break mobile application introduces an innovative integration between digital time management and spiritual engagement, addressing contemporary behavioral issues such as excessive social media use or “brain rot.” Unlike previous works, Quran Break integrates screen time monitoring, app usage restrictions, and personalized Quran reading features to encourage consistent

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spiritual habits. Usability evaluation results, with a SUS score of 75 (Good) and a USEQ score of 87.70% (Very Good), indicate that the application provides an effective and user-friendly experience. Overall, while previous studies focused on accessibility and data presentation, Quran Break expands the scope by linking digital well-being with religious motivation, offering a more holistic approach to Quran engagement in the modern digital age.

Table 9. Comparing Quran Break with Previous Research

Aspect	Akbar A, et al.	Ridhoni I, et al.	Quran Break Mobile App
Primary Purpose	Voice-based Qur'an reading and navigation system.	Online Qur'an application using REST API for digital access.	Encouraging Qur'an reading habits through social media screen-time limitation.
Main Features	Voice command for audio playback and automatic surah or verse search.	Web-based display of verses, translations, and audio.	App time restriction, screen-time monitoring, verse reading and translation, audio playback, save and copy text.
Delivery Platform	Mobile Application (Android).	Web-based.	Mobile Application (Android).
Testing Results	Voice recognition accuracy reached 90%.	The application functioned properly but the testing process was not explicitly described.	SUS Score = 75 (Good), USEQ = 87.70% (Very Good).
Main Contribution	Optimization of interaction through voice command.	Online and integrated presentation of Qur'anic data.	Integration of digital time management with spiritual activity to reduce brain rot.

4.2. Research Limitations

This study has several limitations that should be noted. The sample size in the usability evaluation was relatively small (n=18), so the findings may not fully represent the wider population. In addition, usability testing was based solely on subjective instruments, namely the System Usability Scale (SUS) and the USE Questionnaire (USEQ), with a three-day period of application use prior to completing the questionnaire. Although this duration allows users to become familiar with the main features, this evaluation does not include long-term usage data, so the results obtained represent initial impressions and early usage experiences rather than sustained usage behavior. Finally, the coverage of the Qur'an content depends on data from an external API, namely EQuran.id, which has the potential to cause dependence on internet connections and data updates.

4.3. Recommendations for Future Studies

Based on the limitations identified and user feedback, several directions are recommended for future application research and development. Future research should involve larger and more diverse sample sizes to produce results that are more representative of a broader population. Usability testing should also incorporate long-term usage data, rather than relying solely on short-term subjective tools such as SUS and USEQ, so that researchers can better understand user behavior and engagement patterns over time. Additionally, adding tutorial features can help new users navigate the application more effectively, while options such as adjustable font size and adjustable audio playback delay will improve accessibility and comfort according to diverse user preferences.

From a technical and design perspective, several improvements can be implemented to enhance the user interface and user experience. The layout on devices that use a three-button navigation system

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needs to be optimized so that elements below the scroll bar remain visible and accessible. Similarly, improving keyboard interaction behavior, where input fields remain visible automatically when the keyboard appears, will increase ease of use, especially during the login or feedback submission process. Finally, future development is recommended to expand the application's reach by creating an iOS version, making Quran Break more accessible and inclusive for users on various mobile operating systems.

In addition to these technical recommendations, this study contributes to the fields of religious informatics and human-computer interaction (HCI) by introducing persuasive technology through application-level blocking and spiritual diversion, as well as developing context-aware mobile systems and digital wellbeing frameworks in faith-based applications.

5. CONCLUSION

The Quran Break mobile application was successfully developed as a digital intervention designed to help users reduce excessive social media use and shift their attention to reading the Qur'an. Functionally, this application monitors screen time, restricts social media access after a time limit is reached, and encourages users to engage in spiritual activities instead. Usability testing using the System Usability Scale (SUS) and the Usability Questionnaire (USEQ) yielded scores of 75 (Good) and 87.70% (Very Good). Among all factors, Usefulness received a high rating of 87.78%, indicating that this application is considered highly relevant and effective in encouraging positive behavioral change from doom scrolling habits to engagement with the Qur'an. This means that this application can also serve as a preventive measure against brain rot.

Although these results are promising, this study has several limitations, including a relatively small sample size (n=18) and short-term usability testing without long-term behavioral data. Future research should involve a larger and more diverse group of participants, as well as conduct long-term evaluations to measure sustainable impact. Further improvements could also focus on accessibility and interaction aspects, such as adjustable font size and better keyboard focus behavior.

Beyond its functional scope, Quran Break contributes to the fields of informatics and HCI by applying persuasive technology through real-time behavior tracking, application-level blocking, and faith-based digital interventions. This study develops a context-aware mobile system and digital wellness informatics by demonstrating how technology can be designed not only to limit screen time but also to guide user behavior toward meaningful spiritual engagement. Further research should explore iOS implementation, a six-month longitudinal evaluation, and AI-personalized Quran recommendations to enhance adaptive and context-aware user experiences.

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