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Digitalisation of Qirā'ah Sab'ah Material: A Study on the Design Process of the JTQ Application by IAT Students of UIN Syekh Wasil Kediri

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Abstract. The development of digital technology in Qur'anic studies has encouraged more practical and flexible learning innovations, especially in the course of *qirā'ah sab'ah*, which requires simultaneous theoretical and practical comprehension. However, limited lecture duration and the lack of off-campus learning media hinder students from independently accessing reading materials and variations of *qirā'āt*. Therefore, a group of fifth-semester students from the Qur'anic Studies and Exegesis Program (IAT) at UIN Syekh Wasil Kediri designed an application called *JTQ (Jam' al-Tafāsīr wa Sab' al-Qirā'āt)* as an alternative digital learning medium. This study aims to describe the application's development stages as an initial model of *qirā'āt* digitalization within PTKIN environments, which can be replicated for future technology-based Qur'anic learning media. The research employs a descriptive qualitative method through observation, interviews, and documentation with the development team. The findings indicate that the application's design was created using Canva; the compilation of *qirā'ah sab'ah* materials and reading rules of the *imāms* refers to *Faidhul Barakāt* by KH. Arwani Kudus; classical to contemporary tafsīr sources were obtained from external platforms such as Archive and Maktabah Syamilah; audio recordings were performed by competent students; the materials were compiled in PowerPoint and converted into HTML5 via *iSpring Suite*, then into an APK file using *APK Builder*. The stages of conceptualization, content digitalization, audio production, multimedia integration, and application compilation resulted in a practical, structured, and accessible learning medium.

Keywords: *Digital learning media; Digitalisation of the Qur'an; JTQ Application; Qirā'ah Sab'ah*

1. Introduction

The development of digital technology in Qur'anic studies today is demonstrating an increasingly rapid trend. Various forms of religious digitalisation have emerged, such as exegetical studies that are easily accessed through television broadcasts (MZ et al., 2022), Qur'anic recitations disseminated via social media platforms (Rahman, 2020), and digital Qur'an applications that provide reading and

translation features (Muzakky, 2020). These digital products are evolving adaptively to meet the needs of modern learning, which demands rapid, flexible, and interactive access. The presence of these digital media contributes significantly by providing more practical religious materials for pupils, university students, and the general public (Firdaus, 2023).

In higher Islamic education institutions, application-based learning innovations have developed in response to contemporary academic challenges, particularly in the delivery of materials requiring practical engagement and continuous guidance. However, among the various existing products of Qur'anic digitalisation, attention to the science of qirā'āt remains relatively limited compared to other branches such as tafsīr. In fact, qirā'āt is closely related to the authenticity of Qur'anic recitation and plays an important role in maintaining authoritative readings according to their recognised transmissions. Historically, the teaching of qirā'āt has developed predominantly in pesantren through the methods of talaqqī and musyāfahah, which emphasise gradual, direct instruction with a teacher (Zaini Hafidh, 2022).

As academic demands continue to increase, the science of qirā'āt has now been systematically integrated into the curriculum of State Islamic Higher Education Institutions (PTKIN), including within the Qur'anic Studies and Exegesis programmes. However, the complexity of the material and limited face-to-face session time often prevent the variations of qirā'āt imams from being delivered in depth, resulting in students facing difficulties in mastering phonetic aspects, reading principles, and the exegetical sources underpinning them. This situation highlights the urgency for learning innovations capable of bridging theoretical and practical needs through the support of digital technology, enabling qirā'āt proficiency to be achieved more effectively, comprehensively, and sustainably (Widayati, 2021).

In response to these challenges, a group of fifth-semester students from the Qur'anic Studies and Exegesis Programme at the State Islamic University of Syekh Wasil Kediri took the initiative to design the JTQ application (Jam' al-Tafāsīr wa Sab' al-Qirā'āt) as an alternative digital learning medium. The integration of multimedia within the application is expected to offer a more comprehensive learning experience, streamline the process of mastering the material, and encourage student independence outside lecture hours. Thus, the presence of the JTQ application serves as a pedagogical adaptation to the digital era in Qur'anic studies.

This research aims to describe the stages involved in designing the JTQ application as an initial model for the digitalisation of qirā'āt studies within PTKIN environments. The contribution of this research lies in the formulation of a technical framework for developing Qur'anic learning media based on digital technology which can be replicated by other educational institutions. Furthermore, this study reinforces the urgency of digitalising Qur'anic sciences as part of academic adaptation in an era of technological transformation.

2. Method

The research method employed in this study is qualitative descriptive, utilising three primary data collection techniques: direct observation, semi-structured interviews, and artefactual documentation involving the JTQ application development team, consisting of two fifth-semester students from the Qur'anic Studies and Exegesis Programme (IAT) at the State Islamic University of Syekh Wasil Kediri. Observations were conducted across three meeting sessions (each lasting approximately 60 minutes) to monitor the workflow of visual design, the systematic arrangement of qirā'ah sab'ah materials, and the process of integrating audio into PowerPoint slides. Meanwhile, interviews were held twice (lasting 30–45 minutes per session) to explore pedagogical considerations, reasons for software selection, and the navigational structure implemented. Documentation in the form of Canva design files, qirā'āt audio recordings, PowerPoint slides, HTML5 files, and APK packages was collected as digital traces for further analysis.

Data analysis was carried out through the stages of reduction, categorisation, cross-verification, and conclusion drawing. The operational procedure of application development was traced sequentially, encompassing the stages of conceptualisation, compilation of referential content, multimedia integration, conversion of slides into HTML5 format using iSpring Suite, and final compilation into an APK using APK Builder. Each step was recorded in detail to ensure replicability by other researchers employing similar software and technical configurations. The final results of the analysis provide a comprehensive overview of the JTQ application's development workflow as a learning medium that is ready to be functionally tested within an academic context.

3. Results and Discussion

Teaching Qirā'ah Sab'ah in the Academic Environment

The study of qirā'ah sab'ah is one of the branches of *ʿulūm al-Qur'ān* that examines the variations of Qur'anic recitation attributed to seven *imāms* of qirā'āt whose transmissions are *mutawātir*. This discipline not only requires theoretical understanding regarding differences in vowelling, letters, elongation (*madd*), and the rules of *khilāf al-qirā'ah*, but also emphasises the practical ability to articulate recitations correctly according to the standards of *talaqqī* and *mushāfahah*. In the Islamic scholarly tradition, mastery of qirā'āt is considered an indicator of depth in knowledge, as Qur'anic recitation cannot be reduced to a single form; rather, it is layered through authentic transmissions that have been inherited across generations (Hissan, 2024).

Historically, qirā'ah sab'ah is attributed to seven well-known *imāms* of qirā'āt, namely Nāfi' al-Madani, Ibn Kathīr al-Makki, Abū 'Amr al-Basri, Ibn 'Āmir ash-Shami, 'Āṣim al-Kūfi, Ḥamzah, and al-Kisā'ī (Amin, n.d.). Each *imām* has two *rāwī* (transmitters) who narrate his recitation, resulting in variations that enrich the dynamics of Qur'anic reading. These variations remain within the boundaries of *tawātur* and do not distort meaning; rather, they enrich linguistic, rhetorical, and interpretive understanding of verses. Therefore, qirā'āt are accepted as part of the textual richness of the Qur'an and as evidence of Allah's preservation of revelation (Pujianto, 2021).

Within the context of teaching at State Islamic Higher Education Institutions (PTKIN), the course on qirā'ah sab'ah is often designed to introduce students to

differences in recitation, their evidences, and application in the *mushaf*. This process is usually integrated through theoretical instruction, the reading of exemplary verses, and *talaqqī* exercises with lecturers. However, this learning is quite complex, as students must memorise reading formulas for each *imām*, identify the loci of recitational differences in specific verses, and consistently practise articulation. These challenges become more pronounced when learning resources outside the classroom are limited and access to audio references is uneven (Widayati, 2021).

Beyond its linguistic aspects, the study of qirā'ah sab'ah also has implications for tafsīr. Differences in recitation may generate meaning variations influencing the interpretation of verses. Therefore, students of Qur'anic Studies and Exegesis are required to understand the relationship between qirā'āt and tafsīr, including how classical and contemporary scholars respond to such variations. Mastery of qirā'ah sab'ah can serve as a strong interpretive asset when conducting verse analyses based on philological or semantic frameworks (Rofi'i et al., 2024).

Accordingly, the teaching of qirā'ah sab'ah requires a systematic pedagogical approach, sufficient theoretical mastery, and sustained pronunciation practice. Success in studying qirā'āt is not only measured by the ability to differentiate recitation variants, but also through understanding their transmission context and their implications for Qur'anic meaning. Due to its complexity, students are required to possess diligence, receive direct supervision from competent instructors, and maintain commitment to accurate recitation according to the *mushāfahah* tradition inherited from past scholars.

The Transformation of Qur'anic Studies in the Digital Era and the Urgency of Digitising Qirā'āt Sab'ah

The development of digital technology has brought significant transformation to various fields of knowledge, including Qur'anic studies. Digitalisation enables access to Qur'anic sciences more rapidly, widely, and flexibly through electronic devices that can be accessed at any time. This is evident from the emergence of various digital platforms featuring electronic *mushaf*, translations, thematic indexes, and keyword-based verse searches. This adaptation aligns with the needs of modern society, which desires convenient access to religious information unrestricted by time and space. Therefore, digitalisation has become one academic response to changing learning patterns in contemporary communities (R.A, 2025).

In addition to ease of access, the digitalisation of the Qur'an offers pedagogical benefits through the presentation of materials that can be reviewed independently. Students, santri, and the general public can deepen recitation, understand verse contexts, and study disciplinary rules without depending on the constant presence of a teacher. Various software tools are now available to study Arabic vocabulary, perform syntactic analysis of verses, and utilise support tools for understanding branches of Qur'anic sciences and tafsīr. With multimedia support, the internalisation of religious values can take place more effectively and personally. Hence, digitalisation is no longer merely a reading aid but also an adaptive platform for theoretical and methodological learning (Seprya, 2025).

This phenomenon is further reinforced by the increasing popularity of televised Qur'anic exegesis programmes, YouTube channels, and other social media platforms

reaching wide audiences. Preachers, academics, and educational institutions can deliver verse interpretations with visual presentations, animations, and infographics to facilitate comprehension. Such delivery models help users contextualise verses with contemporary issues more interactively. The involvement of audio-visual media has also fostered a digital daʿwah ecosystem that is adaptive to advancements in technology and the media consumption patterns of younger generations. The availability of such digital content indirectly expands Qur'anic literacy through relevant and communicative approaches (Istiqlal, 2022).

Furthermore, digital Qur'an applications on Android and iOS devices are rapidly developing with increasingly comprehensive features. Applications such as Quran.com and Al-Qur'an Kemenag provide *murottal* recitations from various *qāri'*, memorisation modes, colour-coded *tajwīd*, and access to diverse tafsīr works. The integration of these features demonstrates that digitalisation has become a strategic instrument for strengthening Qur'anic literacy globally. The success of digitalisation in the domains of *mushaf*, translation, and tafsīr has encouraged the expansion of Quranic Digital Studies with increasingly varied scopes (Luqmana et al., 2023). At this juncture, the urgency of digitising qirā'āt sab'ah emerges as a field that remains relatively untouched despite its substantial pedagogical potential.

The urgency of digitising qirā'āt sab'ah can be observed from the rapid development of the Qur'anic digital ecosystem, which has successfully simplified public access to Islamic knowledge. Various digital products—such as electronic *mushaf* applications, television-based tafsīr broadcasts, and *murottal* content on social platforms—have created more flexible learning spaces unbound by physical limitations. The success of digitalisation in other Qur'anic sciences demonstrates that these disciplines can be effectively adapted to digital media. However, to date, such innovation has rarely been applied to qirā'āt sab'ah, despite the complexity of its recitation variants requiring learning media that are accessible, structured, and repeatable (Nurike et al., 2025).

Beyond accessibility, the digitalisation of qirā'āt sab'ah is important in addressing pedagogical challenges linked to conventional learning methods. Historically, students and santri have relied heavily on direct interaction with teachers through *talaqqī* and *mushāfahah*, which emphasise oral recitation training. Although this method remains ideal, limited face-to-face teaching time in Islamic higher education often results in incomplete delivery of material. Through digital applications, students can repeatedly listen to audio, view recitation formulas, and study variant transmissions at their preferred learning pace. This aligns with benefits offered by other digital Qur'an applications, such as text enlargement, recitation playback, and parallel access to tafsīr (Balqis & Wahyuni, 2025).

Furthermore, the digitalisation of qirā'āt sab'ah has the potential to strengthen Qur'anic literacy in the modern era by presenting integrated multimedia approaches. The combination of pronunciation audio, qirā'āt sab'ah *mushaf*, and references from both classical and contemporary tafsīr can form comprehensive and applicable understanding. This model has proven effective in other digital products that unify recitation, translation, and tafsīr within a single platform. If applied to qirā'āt sab'ah, recitational variations will not only be observed textually, but also practised accurately

according to phonetic standards. Therefore, the digitalisation of qirā'āt sab'ah is not merely a technological innovation but also an academically relevant strategy to preserve recitation quality and broaden learning outreach in the digital age (Sutarmi et al., 2025).

Profile of the Jam' al-Tafāsīr wa Sab' al-Qirā'āt (JTQ) Application: Background, Features, and Objectives

The JTQ (Jam' al-Tafāsīr wa Sab' al-Qirā'āt) application is an innovative product developed by two fifth-semester students of the Qur'anic Studies and Exegesis (IAT) Programme at UIN Syekh Wasil Kediri, namely Abdurrahman Al Kausar and Dika Purnama Aulia Rohma. The initial idea for developing this application originated from the requirements of a course on Qur'anic Digitalisation, which emphasised the integration of technology in Qur'anic studies. At the same time, in the same semester, IAT students were also taking the Ilmu Qirā'āt course, which increased the need for a learning medium that is simple, structured, and easily accessible. This prompted the two students to design an application that not only fulfilled academic coursework but also made a tangible contribution to the learning process of qirā'āt (Kausar & Rohma, 2025).

In the study of Ilmu Qirā'āt, students encounter several challenges that necessitate comprehensive solutions. The limited face-to-face duration of approximately 100 minutes per meeting, with a total of 16 meetings per semester, is insufficient for exploring all variations in recitation. In addition, the lack of references outside the university environment makes it difficult for students to study recitational differences independently. In fact, qirā'āt learning requires consistent practice, theoretical understanding, and clarification of meaning through tafsīr references. Therefore, the need for alternative learning media is becoming increasingly urgent (Kausar & Rohma, 2025).

Previously, several digital Qur'an applications were available, such as those produced by the Ministry of Religious Affairs and the NU Online platform, which generally focus on the Ḥafṣ 'an 'Āṣim transmission. Other applications offer certain qirā'āt, such as Qālūn or Warsh, but they remain fragmented and do not compile all recitations within a single integrated system. This condition presents difficulties for learners who require simultaneous comparison of recitational variations. In response to this issue, the developers of JTQ designed an application format that compiles all seven qirā'āt (qirā'āt sab'ah) systematically by referring to the work *Faidhul Barakāt* by KH. Arwani Kudus, thus constructing a complete and integrated recitational structure (*jam' al-qirā'āt*) (Kausar & Rohma, 2025).

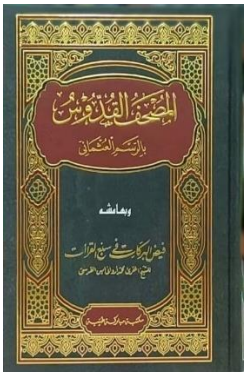

Figure 1. Faidhul Barakāt by KH Arwani Kudus

In addition to containing a compilation of the qirā'āt sab'ah recitations, the JTQ application also includes the recitation formulas of each imam as a quick reference for students. The integration of these formulas enables users to identify differences in recitation without having to open bulky printed references that are impractical for mobility. This becomes an added value of the application, as it simplifies the process of learning the fundamentals before progressing to the stage of pronunciation practice. The concise, compact, and visually based presentation of the material makes understanding qirā'āt easier to absorb (Kausar & Rohma, 2025).

The philosophy behind the name *Jam' al-Tafāsīr wa Sab' al-Qirā'āt* reflects the two main functions of this application. The term *Jam' al-Qirā'āt* refers to the method of combining the variant recitations of the seven canonical imams into a single structured recitational sequence, as found in traditional literature. Meanwhile, the addition of *al-Tafāsīr* indicates that the application does not only focus on recitation, but also provides references from classical to contemporary tafsīr. In this way, users can understand the semantic implications of each recitational variation, while simultaneously strengthening the exegetical dimension of the Qur'an (Kausar & Rohma, 2025).

The availability of tafsīr features in this application also helps students strengthen their theoretical foundation in Qur'anic studies. Differences in recitation often influence interpretation, making the relationship between recitation and meaning highly significant. The presence of tafsīr references allows users to trace the arguments of scholars across periods, study various methodological approaches, and analyse linguistic implications of verses. This provision positions JTQ not merely as an audio-visual medium, but also as a source of scholarly literacy (Kausar & Rohma, 2025).

The JTQ application offers several key features, one of which is a compiled mushaf of the qirā'āt sab'ah arranged sequentially according to the order of sūrahs in the Qur'an. This feature facilitates the comparison of recitations between imams on a single display page. Users can directly scan points of recitational difference within the relevant verse. Consequently, learning becomes more applicative and less abstract than when reading theory alone in textbooks (Kausar & Rohma, 2025).

Besides the mushaf display, JTQ is equipped with audio recordings of the qirā'āt sab'ah recitations performed by students with qualified tilāwah competencies. This audio feature reinforces the aspect of *mushāfahah*, which is typically obtained through *talaqqī*. The audio is paired with the written text, allowing users to follow the

pronunciation repeatedly and refine articulation. This provides an auditory experience rarely available in conventional learning media (Kausar & Rohma, 2025).

Furthermore, the application includes a feature on the history of the qirā'āt sab'ah, containing brief explanations of its emergence, the imams and their transmitters, and the development of its transmission. This feature is essential in providing epistemological context so that users do not memorise recitational variations mechanically. The provision of historical content simultaneously enriches students' insight into the legitimacy and academic value of qirā'āt within the Islamic tradition (Kausar & Rohma, 2025).

The target users of the JTQ application are broad, particularly students who are studying the qirā'āt sab'ah within Islamic State Higher Education institutions (PTKIN) or pesantren. Additionally, the application can be utilised by qārī', santri, lecturers, academics, and the general public interested in exploring Qur'anic recitational variation. Its presence supports independent learning because users can study theory, verse examples, and pronunciation without relying solely on limited face-to-face sessions (Kausar & Rohma, 2025).

The primary aim of developing the JTQ application is to provide a structured, accessible, and practical learning medium for the qirā'āt sab'ah that can be used at any time. This application is expected to become an initial model for the digitalisation of qirā'āt studies that can be replicated and further developed into a more professional product. Furthermore, this application is oriented towards supporting the integration of tafsīr to strengthen meaning, simplifying students' independent understanding of recitational differences, and bridging the limited access to printed references. With the presence of JTQ, qirā'āt learning becomes more directed, systematic, and aligned with today's academic needs (Kausar & Rohma, 2025).

Conceptualisation Stages in the Development of the JTQ Application

The conceptualisation stage forms the foundational stage in the development of the JTQ application, as the entire direction of design, content curation model, and learning orientation are determined at this point. In this phase, the developers conducted a needs analysis through classroom observation, lecturer discussions, and interviews with students studying the qirā'ah sab'ah. The results revealed a gap between the material delivered in class and the availability of digital learning media outside the institution. This condition led to the formulation of an application concept that not only functions as material storage, but also as a tool for pronunciation revision and tafsīr exploration. Thus, conceptualisation ensures that the application has both academic and functional pedagogical characteristics (Kausar & Rohma, 2025).

The preparation of the qirā'ah sab'ah material in the JTQ application relies on authoritative references so that its content achieves a high degree of academic validity. The primary source of reference is *Faidhul Barakāt* by KH Arwani Kudus (Amin, n.d.), which is widely accepted within the traditional pesantren context in the Indonesian archipelago. This reference was selected because it presents a systematic structure of recitation that is easy to understand and applicable in *talaqqī* practice. In addition, the scholarly authority of its author strengthens the epistemological legitimacy of the

material used. Utilising this reference reinforces the classical foundation of the JTQ application (Kausar & Rohma, 2025).

In addition to textual references, the practical formulas for the recitational patterns of the qirā'āt sab'ah used in the application were obtained directly from KH Ahmad Fauzan Pujianto, the caretaker of the Pondok Pesantren Tahfidzul Qur'an Al-Ma'ruf, Mojo, Kediri (Kausar & Rohma, 2025). These formulas are important because they facilitate the mastery of recitational variations through systematic patterns that are memorisable for learners. The formulas are a distilled product of *talaqqī* tradition, rather than merely theoretical notes. With these formulas, students can compare the differences between qirā'āt imams systematically. This accelerates the internalisation of reading patterns in practice.

Academic content validation was carried out through *tashīḥ* by KH Ahmad Fauzan Pujianto to ensure that no writing errors or distortion of rules occurred. Validation is a crucial stage to guarantee that the application is not only visually appealing, but also epistemically accountable. This process was conducted through intensive meetings and re-examination of the manuscript. Following review, several revisions were suggested to adjust terminology with precision. This stage demonstrates that the application was not composed speculatively, but in accordance with pesantren epistemic mechanisms (Kausar & Rohma, 2025).

The arrangement of the material was organised systematically based on the order of the qirā'āt imams so that users can follow the learning progression gradually. The sequence begins with Nāfi' and the transmissions of Qālūn and Warsh, followed by Ibn Kathīr al-Makkī with the transmissions of Qunbul and al-Bazzī, then Abū 'Amr al-Basri with the transmissions of ad-Dūrī and as-Sūsī. This continues with Ibn 'Āmir asy-Syāmī, 'Āṣim, Ḥamzah, and 'Alī al-Kisā'ī, each with two narrators (Amin, n.d.). This order is commonly used in qirā'āt studies to facilitate memorisation. The sequential structuring ensures cohesion between sections (Kausar & Rohma, 2025).

The integration of tafsīr references is carried out to clarify the semantic context of verses that undergo recitational variation in the qirā'āt sab'ah. Source collection was conducted via digital libraries such as Archive and Maktabah Syāmilah, which host thousands of scholarly works. The use of these platforms allows faster and more efficient access. Furthermore, digital formats simplify keyword searches according to verse requirements. This stage affirms that the application does not merely highlight pronunciation, but also understanding (Kausar & Rohma, 2025).

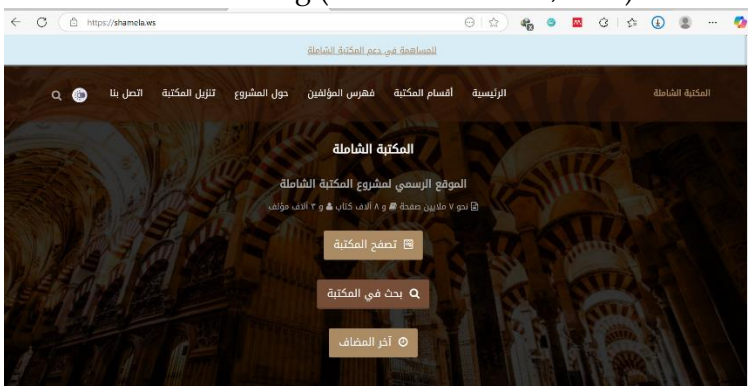

Figure 2. Web Maktabah Syamilah (https://shamela.ws)

Figure 3. Web Archive (https://archive.org)

The selection of tafsīr references was conducted across three spectrums: classical, *wasathī* (moderate), and contemporary, by taking into consideration the methodological characteristics of each mufassir. In this process, the team utilised various sources such as *Tafsīr al-Qurṭubī*, *Jāmi' al-Bayān* by al-Ṭabarī, *al-Kasysyāf* by al-Zamakhsharī, *Tafsīr al-Alūsī*, *Mafātīḥ al-Ghayb* by Fakhr al-Dīn al-Rāzī, *Ma'ālim al-Tanzīl* by al-Baghawī, *Tafsīr al-Jalalayn*, *Naẓm al-Durar* by al-Biqā'ī, *al-Taḥrīr wa al-Tanwīr* by Ibn 'Āshūr, *Anwār al-Tanzīl* by al-Bayḍāwī, *al-Nukat wa al-'Uyūn* by al-Māwardī, *Tafsīr Ibn Kathīr*, *Asbāb al-Nuzūl* by al-Wāḥidī, and *Fatḥ al-Qadīr* by al-Syawkānī.

In addition, the references include *Tafsīr Zād al-Masīr* by Ibn al-Jawzī, *al-Jāmi'* by al-Tsa'labī, *Fī Ẓilāl al-Qur'ān* by Sayyid Quṭb, *Madārik al-Tanzīl* by al-Nasafī, *al-Munīr* by al-Zuhaylī, *Marāḥ Labīd* by Nawawī al-Bantanī, *Taysīr al-Karīm al-Raḥmān* by al-Sa'dī, *Tafsīr al-Manār* by Muḥammad 'Abduh and Rashīd Riḍā, *al-Jawāhir* by Ṭanṭāwī Jauharī, *Ṣafwah al-Tafāsīr* by al-Ṣābūnī, *Tafsir al-Azhar* by Hamka, and *Tafsīr al-Miṣbāḥ* by Quraish Shihab. This diversity of spectrums enables users to understand the breadth of exegetical perspectives and strengthen contextual meaning in verses that contain recitational differences (Kausar & Rohma, 2025).

The interpretative method used within the application is adjusted to the characteristics of the verse being discussed, rather than imposing a homogeneous explanation. The interpretation of verses with legal implications is presented through a jurisprudential approach, whereas verses with theological nuances receive doctrinal elaboration. This demonstrates that each variant of qirā'āt carries semantic consequences that must be read through the appropriate discipline. This methodological approach enriches the content and enhances its academic value. Consequently, users are able to comprehend the structural meanings underlying recitational differences (Kausar & Rohma, 2025).

The production of audio constitutes an important stage because the pronunciation of the qirā'āt sab'ah cannot be fully understood through text alone. The selection of the qārī' was based on considerations of tajwīd competence and precision in articulating *makhārij al-hurūf*. Phonetic standards were applied to ensure that every recitational difference is audibly clear. Additionally, the recording was conducted in a conditioned space to avoid sound interference. This stage guarantees pronunciation accuracy within the application (Kausar & Rohma, 2025).

Following the recording process, the audio underwent editing to adjust volume, clarity, and pause duration. This stage is crucial because poor audio quality may hinder

the user's learning process. The audio format was then tailored to ensure compatibility with PowerPoint as a multimedia container. Afterward, the audio was integrated precisely into the slides containing the relevant verses. This integration enables users to play recordings directly from the visual display (Kausar & Rohma, 2025).

Figure 4. Audio Qira'at Sab'ah

The application's user interface design was created using Canva, as this platform enables a simple, informative, and visually appealing composition. The layout was arranged by considering eye movement patterns so that users can study comfortably. The colour selection was made harmoniously to avoid being overly striking while still providing good contrast. The typography was chosen to ensure readability for both Arabic text and its translation. Supporting icons are displayed to guide navigation (Kausar & Rohma, 2025).

Aesthetic considerations are also integrated with pedagogical aspects so that the interface is not only attractive, but also supports the user's visual cognition. Colour contrast assists users in distinguishing important elements such as recitational formulae and the variations of the imams. The icon design was made familiar based on modern interface standards. All of this aims to shorten user adaptation time. Thus, the application possesses clarity in its visual structure (Kausar & Rohma, 2025).

Figure 5. JTQ App Preview

User navigation consistency was taken into account to prevent confusion when moving between pages. Each button was created uniformly and placed in the same location on every slide. This is important for developing intuitive navigation patterns. Consistency also reduces the user's cognitive load. Thus, the learning experience becomes more efficient (Kausar & Rohma, 2025).

PowerPoint was used as a multimedia container because it is capable of combining text, audio, and visuals in a single space. Each slide was arranged based on the previously designed material structure. In addition, PowerPoint supports responsive animation and audio playback features. The use of PowerPoint serves as an inexpensive and flexible alternative in application development. Consequently, the production process becomes more efficient (Kausar & Rohma, 2025).

The placement of interactive links was carried out using hyperlink techniques to facilitate transitions between sections. These hyperlinks connect material slides with audio or tafsīr slides, allowing users to move without having to follow a linear sequence. This navigation system resembles the concept of modern interactive applications. The presence of hyperlinks prevents user boredom due to traditional navigation. This makes the application more dynamic and flexible (Kausar & Rohma, 2025).

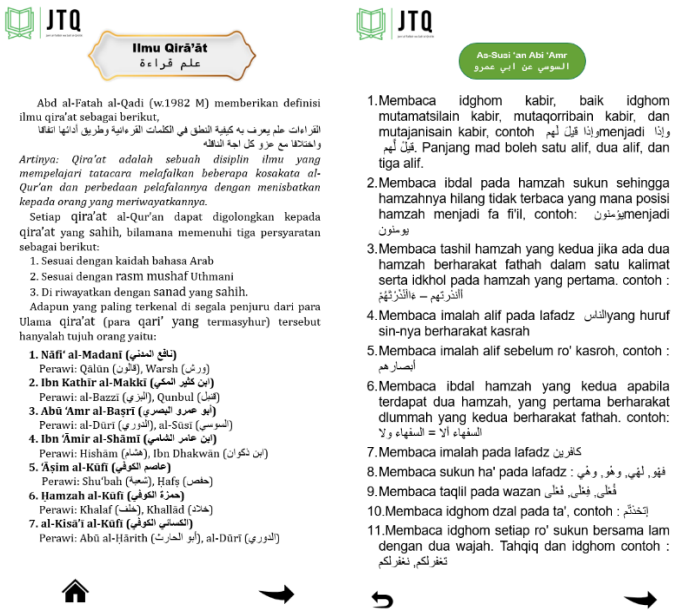

Figure 6. JTQ App Hyperlink Button

The conversion to HTML5 via iSpring Suite was carried out so that multimedia content could operate on various devices. The reason for selecting iSpring lies in its stable compatibility with audio features and hyperlinks. The exporting process was undertaken by adjusting the screen resolution to prevent display distortion. After the conversion, the application was tested on an internal browser to ensure functional integrity. This stage determines the technical portability of the application (Kausar & Rohma, 2025).

Figure 7. iSpring Suite in Power Point (https://www.ispringsolutions.com/ispring-free/download)

The conversion from HTML5 to APK was conducted so that the application could be installed directly on Android devices without the use of a browser, utilising an APK builder. The compilation procedure was carried out by configuring the package name, icon, and folder structure. Size adjustments were made to ensure that the application would not be too heavy to run on mid-specification devices. After compilation, the APK file was tested on several devices to assess its responsiveness. This stage enables the application to reach a wider range of users (Kausar & Rohma, 2025).

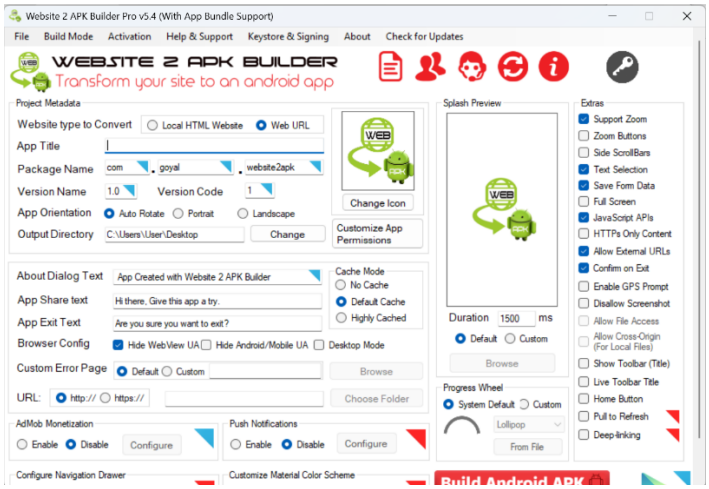

Figure 8. APK Builder (https://websitetoapk.com/index.html)

No.	Development Stage	Description of Core Activities	Main Output
1	Compilation of Qirā'ah Sab'ah Material	Extraction of primary references from *Faidhul Barakāt* by KH. Arwani Kudus, formulation of reading patterns, and validation through expert *tashīḥ*	Accurate and systematic qirā'āt reading material
2	Integration of Tafsīr References	Selection of classical–contemporary tafsīr from Archive, Maktabah Syamilah, and Nusantara literature according to the contextual relevance of verses	Comprehensive and representative tafsīr variations
3	Production of Recitation Audio	Selection of a competent *qārī'*, enforcement of *tajwīd* and phonetic standards, recording, and basic editing	Clear, standardised, and integrated recitation audio
4	Interface Design (Canva)	Arrangement of visual layout, selection of colour–typography–icon sets, and navigation consistency	Aesthetic, user-friendly, and functional display
5	Content Compilation in PowerPoint	Integration of text, audio, and visuals, along with the use of hyperlinks for inter-slide navigation	Dynamic and interactive multimedia container
6	Conversion to HTML5 Format	Exporting material through iSpring Suite for cross-device compatibility	Portable and responsive multimedia package

7	Compilation to APK	Building via APK Builder and adjusting assets for optimal functionality on Android	APK file ready for installation

Strengths, Limitations, and Implications of the JTQ Application

The pedagogical advantages of the JTQ application lie in its ability to integrate the reading material of the *qirā'ah sab'ah*, practical formulae of the qirā'āt imams, and tafsīr references within a single, easily accessible medium. The sequential visual presentation and repeatable audio support both auditory and visual learning styles, thereby strengthening theoretical understanding as well as correct recitation. Furthermore, the availability of multiple tafsīr references enables users to gain a more comprehensive interpretation of verses. In the context of learning within Islamic Higher Education Institutions (PTKIN), these features offer an alternative for students to deepen their competence in qirā'āt without relying solely on face-to-face teaching.

From a technical perspective, the application offers several advantages due to its APK format, which allows direct installation on Android devices without requiring a stable internet connection. Multimedia conversion through PowerPoint and HTML5 enables more intuitive navigation, while audio integration within slides provides an interactive experience resembling professional applications. The interface designed through Canva produces a clean, lightweight display that does not burden device memory. Consistent user flow supports rapid adaptation among first-time users.

However, several potential technical challenges require attention. Audio quality may be affected by the recording device and environment, thus necessitating further editing to reduce noise. The file size, which can be relatively large, may impact devices with lower specifications. Additionally, the application is not yet available across multiple operating systems (such as iOS), limiting its reach to Android users only. The absence of an automatic update feature also requires users to reinstall newer versions manually (Kausar & Rohma, 2025).

Nevertheless, development of the JTQ application has the potential to become an initial model adoptable by other universities, particularly PTKIN institutions that offer modules in *qirā'ah sab'ah* or *'ilm al-qirā'āt*. Its integrative format—combining recitation, formulae, audio, and tafsīr—provides a replicable model of digital learning that can be adjusted to local curricula. Inter-university collaboration may even encourage the establishment of a digital Qur'anic consortium to produce nationally standardised content (Kausar & Rohma, 2025).

For independent learning, the application has a positive impact because it allows students to access material without the limitations of space, time, or teaching presence. Users can repeat recitations as needed and compare differences between qirā'āt directly without consulting multiple sources simultaneously. This aligns with self-paced and student-centred learning paradigms increasingly adopted in higher education.

The application's contribution to digital qirā'āt literacy is substantial, particularly by providing verified and easily understood learning resources. The integration of tafsīr strengthens the dimension of meaning so that the study of qirā'āt does not remain solely

at the phonetic level, but encompasses the broader epistemology of the Qur'an. Hence, the JTQ application is not only a practical learning medium, but also enriches the growing body of digital Qur'anic studies within the academic technological era (Kausar & Rohma, 2025).

4. Conclusion

The development of the JTQ (Jam' al-Tafāsīr wa Sab' al-Qirā'āt) application represents a significant initial step in integrating pedagogical needs with digital innovation in qirā'āt studies within Islamic higher education. Through structured stages—from conceptualisation, compilation of material based on authoritative sources, integration of classical-to-contemporary tafsīr, audio production, multimedia compilation, conversion to HTML5, and packaging into APK format—the application succeeds in providing a practical, structured, and easily accessible learning medium. Features such as qirā'āt compilation, explanatory formulae, and diverse tafsīr references enable students to independently deepen their understanding beyond limited classroom hours. Thus, this project demonstrates that Qur'anic learning can be collaboratively designed while maintaining academic rigour and practical utility.

Based on the findings, recommendations for future research include the development of interactive speech-recognition features, automatic update systems, expansion of the tafsīr database, and cross-platform compatibility to reach broader audiences. In addition, further collaboration with software engineers, qirā'āt experts, and instructional designers is required to enhance technical and pedagogical quality. Subsequent research is also encouraged to conduct user experience analysis, quantitative evaluation of learning outcomes, and comparative studies with other digital media. It is hoped that this study will inspire similar developments within digital Qur'anic research and enrich discourse on qirā'āt literacy in the era of educational technological transformation.

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