

ACCESSIBILITY AND EFFECTIVENESS OF QUR'ANIC BRAILLE INSTRUCTION FOR VISUALLY IMPAIRED STUDENTS: A CASE STUDY AT BUKESRA, BANDA ACEH

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ABSTRACT

This study aims to analyze the accessibility and effectiveness of Qur'anic Braille instruction for blind students at SDLB Bukesra Ulee Kareng, Banda Aceh. Employing a qualitative approach with a case study method, data were collected through interviews, observations, and questionnaires. The findings reveal that the school has developed an effective inclusive learning system by providing Braille Qur'ans and implementing various teaching methods such as A-to-Z, Synthetic Structural Analysis (SAS), left-code technique, and *talaqqi*. Teachers also offer individualized support to address learning challenges. Students generally master reading and writing the Qur'an in Braille within an average of three months and have achieved recognition in local Braille Qur'an reading competitions. Nevertheless, the study identifies several challenges, including limited availability of Braille Qur'ans in the dormitory, the absence of the “*Nun Wiqayah*” symbol in Braille scripts, and a shortage of trained professionals. These findings highlight the need for enhanced resources and institutional support to optimize Qur'anic learning for blind students.

Keywords: *Qur'anic Braille learning, disability, blind students, accessibility, inclusive education.*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis aksesibilitas dan efektivitas pembelajaran Al-Qur'an dalam Braille bagi siswa tunanetra di SDLB Bukesra Ulee Kareng, Banda Aceh. Menggunakan pendekatan kualitatif dengan metode studi kasus, data dikumpulkan melalui wawancara, observasi, dan penyebaran kuesioner. Hasil penelitian menunjukkan bahwa sekolah telah mengembangkan sistem pembelajaran inklusif yang efektif, dengan menyediakan Al-Qur'an Braille dan menerapkan berbagai metode seperti A-to-Z, Synthetic Structural Analysis (SAS), teknik kode kiri, dan *talaqqi*. Guru juga memberikan bimbingan individual dalam menghadapi kendala belajar. Siswa umumnya mampu menguasai kemampuan membaca dan menulis Al-Qur'an Braille dalam waktu rata-rata tiga bulan serta menunjukkan prestasi dalam kompetisi tingkat lokal. Namun, penelitian ini juga mengidentifikasi beberapa tantangan, seperti keterbatasan Al-Qur'an Braille di asrama, tidak tersedianya simbol “*Nun Wiqayah*” dalam versi Braille, dan kurangnya tenaga pengajar profesional. Temuan ini menggarisbawahi pentingnya penguatan sumber daya dan dukungan institusional untuk mengoptimalkan pembelajaran Al-Qur'an bagi siswa tunanetra.

Kata Kunci: *Pembelajaran Al-Qur'an Braille, disabilitas, siswa tunanetra, aksesibilitas, pendidikan inklusif.*

A. Introduction

In the province of Aceh, religious education occupies a significant and privileged position within its cultural and legal framework, reflecting the deep-rooted Islamic values held by the community. This prominence is enshrined in the Aceh Government Law (UUPA) Number 11 of 2006, which affirms the right of every Acehnese citizen to access high-quality Islamic education. This education is designed not only to preserve religious teachings but also to remain adaptable to advancements in science and technology, ensuring that the region's educational system is both modern and spiritually grounded. Furthermore, the Regulation of the Minister of Education and Culture Number 79 of 2014 underscores the importance of incorporating local cultural and religious content into the curriculum, which strengthens the role of Quranic education in schools across the province.¹ Additionally, Aceh's commitment to maintaining Islamic principles in education is reinforced through the regional Qanun on education, specifically Qanun Number 9 of 2015. This regulation serves as a derivative of Law Number 44 of 1999, which mandates the inclusion of Islamic teachings and practices in various levels and forms of education.

However, it seems that the Aceh Government's attention to people with disabilities, especially the blind in Aceh, is still minimal.² The challenges faced by students at The Extraordinary Elementary School (SDLB) *Bina Upaya Kesejahteraan Para Cacat* (BUKESRA) Foundation, Ulee Kareng, Banda Aceh, in accessing Qur'anic education are evident in their limited access to Braille Qur'an materials, which are not available at their school. The obstacles encountered in providing effective Braille Qur'an instruction at SDLB BUKESRA can be categorized into three main issues. First, the scarcity of Braille Qur'an materials necessitates collaboration with UPTD *Rumoh Seujahtera Beujroh Meukarya*, which offers external support through dormitory facilities and instructional coaching. While this partnership provides essential resources, it also complicates access to learning materials and reduces the school's direct teaching capacity.

Second, space limitations at the school prevent it from accommodating all visually impaired students on-site, making reliance on external facilities unavoidable. This dependency disrupts the continuity of instruction and limits opportunities for direct teacher-student interaction, affecting the overall learning experience. The third and equally crucial problem relates to the absence of proper tajweed signs in Braille Qur'an materials, which significantly hampers the students' ability to learn and recite Quranic verses accurately according to established rules. Teachers have consistently reported that certain essential indicators, such as the "*Nun Wiqayah*" (a small letter "Nun" positioned under "Alif" to indicate *wasal* reading in the printed Qur'an), are entirely missing in the Braille version. This omission causes frequent and recurring errors in recitation, especially when students mistakenly read *wasal* incorrectly, which impacts the overall quality of their Quranic proficiency. As a result, instructors are compelled to invest considerable time and effort repeatedly correcting these errors and reinforcing tajweed rules during each lesson. This

¹ Sri Suyanta and Tri Wahyudi Ramdhan, 'Integrating Islamic Values Into Education In Aceh (Reviewing The Qanun On Education)', *Journal of Positive School Psychology*, 2022.6 (2022), pp. 7849–60.

² Dara Maisun and Roma Ulinuha, 'Eksistensi Forum Bangun Aceh Dalam Mendampingi Livelihood Disabilitas', *TAJDID: Jurnal Ilmu Ushuluddin*, 21.1 (2022), pp. 81–107, doi:10.30631/tjd.v21i1.242.

additional instructional time not only slows the students' progress but also creates frustration for both teachers and learners, undermining the efficiency of the learning process. To address this issue, it is essential to prioritize the further refinement and enhancement of Braille Qur'an texts, including the integration of accurate tajweed markings, as well as to provide improved educational resources and tools designed to support visually impaired students in mastering Quranic recitation with greater ease and precision.

This situation is not in accordance with the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 79 of 2014, which mandates the inclusion of local content as study material or learning media. Additionally, it contradicts the mandate of Qanun Aceh on Education Number 9 of 2015, which is a derivative of Law Number 44 of 1999, Article 4, Paragraph (2). This article stipulates the development and regulation of various types, pathways, and levels of education, along with the integration of local content in accordance with Islamic law. One of the key provisions includes incorporating Qur'anic reading instruction from an early age in elementary schools.³ Therefore, a number of basic education institutions in Aceh, both formal and non-formal, emphasize the learning of the Qur'an in the process of teaching and learning activities.⁴ This can be seen in schools that carry out routine activities of reading the Qur'an before the teaching and learning process takes place, and Qur'an reading lessons are held in the afternoon as local content courses.⁵

Furthermore, the implementation of education in Indonesia is guided by the principles of democracy and justice, emphasizing respect for human rights, Islamic values, cultural heritage, and local content. In line with this, the current direction of the national education system prioritizes the provision of inclusive education, particularly ensuring accessibility for individuals with disabilities. Inclusive education is designed to accommodate all students by fostering equal learning opportunities within the same classroom environment, without discrimination based on gender, intelligence level, character, physical condition, or psychological state.⁶ Therefore, the main goal of inclusive education is to humanize every child and overcome discriminatory attitudes⁷ that cause educational institutions to reject the presence of children with special needs.⁸ Inclusive education, in this case, includes a teaching system that combines children with special needs

³ Dkk Abubakar, 'The Implementation Of Local Values In Aceh Education Curriculum', *Jurnal Ilmiah Peuradeun*, 10.1 (2022).

⁴ Amirul Haq Rd, Mahmud Arif, and Rahmad Syah Putra, 'Aceh Education Specificity Policy : Study on Efforts to Educate Islamic Values (Memadrasahkan) Toward Public Schools in Aceh', 2023, pp. 1035–40.

⁵ Edy Putra Kelana, 'Implementasi Kebijakan Desentralisasi Pendidikan Dalam Konteks Pemerintahan Aceh', *Lentera*, 15.13 (2015), pp. 1–11.

⁶ Danuri and others, 'Numerical Literacy and Math Self-Concept of Children with Special Needs in Inclusive Elementary Schools', *International Journal of Instruction*, 16.3 (2023), pp. 1095–1112, doi:10.29333/iji.2023.16358a.

⁷ Ruslan Abdul Gani, 'Learning Methods of Tahfizh Al-Qur'an in Improving the Quality of Memorization of Visually Impaired Santri in Islamic Boarding Schools', *Jurnal Impresi Indonesia*, 3.7 (2024), pp. 550–71, doi:10.58344/jii.v3i7.5296.

⁸ Rosyadi BR, Hasan Baharun, and Dewi Asiya, 'Inclusive Education Management in the Development of Cognitive Intelligence of Children', *AL-ISHLAH: Jurnal Pendidikan*, 13.2 (2021), pp. 1057–67, doi:10.35445/alishlah.v13i2.538.

with typical children.⁹ In this environment, the school environment provides freedom to support children with special needs.¹⁰ The problem then is in general, the Qur'an that has been read is in the form of sheets of paper or *mushaf* that can only be read by students who can read the Qur'an with their senses.¹¹ Students with disabilities, particularly those who are visually impaired, are unable to read the Qur'an in the same manner as other children. Instead, their learning process relies solely on the *talaqqi* method, in which they listen to Qur'anic verses recited by educators without having direct visual access to the written text.¹²

Based on the discussion above, this paper examines three key issues related to the accessibility and effectiveness of Qur'anic reading for students with disabilities at SDLB *Bina Upaya Kesejahteraan Para Cacat* (BUKESRA) in Banda Aceh. Specifically, it investigates: (1) the methods used to teach the Braille Qur'an to visually impaired students at SDLB BUKESRA; (2) the impact of Braille Qur'an usage on students' reading abilities; and (3) the challenges encountered in the learning process of the Braille Qur'an at SDLB BUKESRA, Banda Aceh.

This qualitative field study explores the process and significance of Braille Qur'an instruction at the *Bina Upaya Kesejahteraan Para Cacat* (BUKESRA) Foundation in Ulee Kareng, Banda Aceh. The research population includes all visually impaired students and Braille instructors at the institution, with the sample focusing on those actively learning the Braille Qur'an. Data were gathered through semi-structured interviews, systematic classroom observations, and questionnaires completed by instructors. These tools provided rich insights into the effectiveness of Braille Qur'an learning and enabled a comprehensive evaluation of teaching methods, instructional challenges, and student outcomes.

B. Result and Discussion

1. Overview of SDLB BUKESRA Ulee Kareng Banda Aceh

SDLB BUKESRA Ulee Kareng, Banda Aceh, is a formal educational institution operating under the supervision of the Banda Aceh City Education Office. Established on February 1, 1982, it is located at Jl. Kebun Raja No. 7, Doy Village, Ulee Kareng District. Initially, in 1982, it was founded as a community-driven initiative by individuals with disabilities under the name *Badan Usaha Kesejahteraan Cacat* (BUKESRA), serving as a non-formal educational institution dedicated to supporting visually impaired children under the management of the foundation. A year later, in 1983, the BUKESRA Foundation established a collaboration with the Education Office, enabling the institution to provide formal education for visually impaired children, ensuring they receive the same educational

⁹ Norma S. Blecker and Norma J. Boakes, 'Creating a Learning Environment for All Children: Are Teachers Able and Willing?', *International Journal of Inclusive Education*, 14.5 (2010), pp. 435–47, doi:10.1080/13603110802504937.

¹⁰ S B Wibowo and J A Muin, 'Inclusive Education in Indonesia: Equality Education Access for Disabilities', *KnE Social Sciences*, 3.5 (2018), p. 484, doi:10.18502/kss.v3i5.2351; Blecker and Boakes.

¹¹ Rubini Rubini and Cahya Edi Setyawan, 'Inclusion Education: Learning Reading Arabic Language And Alquran For Blind', *Al-Bidayah: Jurnal Pendidikan Dasar Islam*, 11.2 (2020), pp. 330–45, doi:10.14421/al-bidayah.v11i2.348.

¹² Salmihah Che Mud, Fariza Sham, and Manisah Mohd Ali, 'Learning Al-Quran for Children With Disabilities', *Jurnal Hadhari*, 13.1 (2021), pp. 135–46; Agus Riwanto and others, 'Access to Places of Worship for Persons with Disabilities in Indonesia: Law and Policy Completion', *Cogent Social Sciences*, 9.2 (2023), doi:10.1080/23311886.2023.2243753.

opportunities as other children in the nation. Over time, this school continues to grow by providing educational services to students with special needs such as Deaf, Visually Impaired and Visually Impaired, Visually Impaired Students, Speech Impaired Speech, Autism, Hyperactivity, and Down Syndrome. And in 1996 the BUKESRA foundation established an Extraordinary Junior High School (SMPLB) and in 2004 the foundation tried to establish an Extraordinary Senior High School (SMALB). And until now, the BUKESRA foundation has graduated children from these three levels.¹³

SDLB BUKESRA employs a total of 40 teachers, including the school principal, contract teachers, and honorary teachers. Some of these educators possess specialized skills, such as teaching the Qur'an in Braille, and among them are individuals who are visually impaired. Despite the majority being non-civil servants, the teachers at this institution demonstrate a high level of dedication. In addition to delivering the standard curriculum, they provide specialized guidance tailored to the needs of students with disabilities (*Anak Berkebutuhan Khusus*– ABK). The school currently serves 158 students, comprising 90 elementary-level (SDLB) students, 40 junior high school-level (SMPLB) students, and 28 senior high school-level (SMALB) students. This significant student enrollment reflects the public's confidence in SDLB BUKESRA as a provider of inclusive and effective education. The facilities and infrastructure at SDLB BUKESRA are still in the development stage. The school has a learning building, teachers' rooms, classrooms, and a permanent library. However, related to the learning of the Qur'an in Braille, SDLB BUKESRA does not educate its students at the school directly at SDLB BUKESRA, but these students are placed in a Social Home called the *Rumoh Seujahtra Beujroh Meukarya* Service Technical Service Unit (UPTD) Ladong village, Mesjid Raya district, Aceh Besar Regency, because of the facilities in SDLB BUKESRA Ulee Kareng Banda Aceh indeed incomplete.¹⁴ This means that their status is SDLB BUKESRA Ulee Kareng Banda Aceh students, but the learning process is at UPTD *Rumoh Seujahtra Beujroh Meukarya*, Ladong, Aceh Besar.

This arrangement is based on several key considerations. First, visually impaired students require a specialized and conducive learning environment to maximize their proficiency in Braille. Second, dedicated quarantine facilities are necessary to provide visually impaired students with greater flexibility in managing their study time while fostering the development of their talents and interests. Additionally, several Braille Qur'an teachers at SDLB BUKESRA Ulee Kareng are officers from UPTD *Rumoh Seujahtra Beujroh Meukarya* in Ladong, Aceh Besar, who are also visually impaired. Given their condition, commuting back and forth to SDLB BUKESRA is not feasible, further necessitating the provision of dedicated learning spaces Ulee Kareng.¹⁵

UPTD *Rumoh Seujahtra Beujroh Meukarya* is an Official Technical Service Unit under the Government of Aceh, responsible for providing social services and rehabilitation for persons with disabilities and other individuals categorized as Persons with Social Welfare

¹³ Interview with Munawarman, Principal of SDLB BUKESRA Ulee Kareng on August 22, 2023.

¹⁴ Interview with Mr. Amir, S.Kom, a Head of the Extraordinary and Out-of-School Service Unit of the Banda Aceh City Education Office on July 27, 2023.

¹⁵ Interview with Juwairiah, Instructor of the Qur'an Braille UPTD *Rumoh Seujahtra Beujroh Meukarya* on August 23, 2023.

Problems (PMKS). This unit operates under the direct supervision of the Aceh Social Service and plays a crucial role in facilitating comprehensive social support. Its functions include the formulation of service plans, development and rehabilitation programs, administrative and governance management, coordination of referrals with relevant agencies, and the provision of educational and further development facilities. Additionally, the UPTD is responsible for conducting monitoring, evaluation, and reporting on all activities undertaken. These functions are designed to ensure the sustainability of social guidance and rehabilitation programs for its beneficiaries.

UPTD *Rumoh Sejahtera Beujroh Meukarya* also provides special services for visually impaired students at SDLB BUKESRA. They provide teachers so that students do not need to go back and forth between Ladong and Ulee Kareng which is a long distance, just take the final exam at SDLB BUKESRA. This UPTD is actively looking for visually impaired children to be registered as students at SDLB BUKESRA as well as being fostered in the UPTD environment.¹⁶ This effort demonstrates their commitment to providing access to proper education and coaching for people with disabilities in Aceh.

2. Teaching Method of the Braille Qur'an at SDLB BUKESRA Ulee Kareng

The method used to teach the Qur'an Braille for SDLB BUKESRA Ulee Kareng students is adjusted to the level of needs and abilities of the students because visually impaired students have special needs that are different from other normal students.¹⁷ Teachers also use special methods that are applied following standards such as Braille letter recognition method from A to Z, and the Synthetic Structural Analysis (SAS) method and left-hand method, in addition to the *talaqqi* method.¹⁸ A to Z method is A technique of teaching reading and starting Braille using the A to Z letter recognition method is that students memorize letter by letter until memorized, after which the teacher will teach how to string letters into one word. One word becomes words and then becomes a sentence¹⁹. The SAS learning strategy was initially applied to learn to read from an early age in elementary school. However, now the SAS method is used in various fields of teaching, including to people with disabilities.²⁰ The steps of the SAS method are: (1) structural as a whole, (2) analytics according to the decomposition process, and (3) synthetics recombine to the original structural form.²¹ This will have a positive impact on children's memory and understanding. However, this method is rarely used because it is difficult. For example, letter recognition through word recognition, decomposed into letters, then assembled into syllables. Example: word *Satu* becomes *sa-tu* then becomes *s-a-t-u*. As for the Left-hand

¹⁶ Interview with Munawarman, Principal of SDLB BUKESRA Ulee Kareng on August 22, 2023.

¹⁷ Interview with Junaidi, Instructor of the Qur'an Braille UPTD Rumoh Sejahtera Beujroh Meukarya on August 23, 2023.

¹⁸ Interview with Munawarman, Principal of SDLB BUKESRA Ulee Kareng on August 22, 2023.

¹⁹ M. N. Khan and others, 'Gas Tracers: A Decade of Learning and Experience', *JPT, Journal of Petroleum Technology*, 69.9 (2017), doi:10.2118/0917-0062-jpt; Sophie McKenzie, Aaron Spence, and Maria Nicholas, 'Going on Safari: The Design and Development of an Early Years Literacy Ipad Application to Support Letter-Sound Learning', *Electronic Journal of E-Learning*, 16.1 (2018), pp. 16–29.

²⁰ Komang Astrini Widita Mahayasih, 'The Implementation Of The Sas Method With Picture Card Activities To Enhance Initial Reading Abilities', *Eduvest - Journal of Universal Studies*, 4.6 (2024), pp. 5466–78, doi:10.59188/eduvest.v4i6.1163.

²¹ Widita Mahayasih.

method, the teacher introduces the letters Braille with the left code, namely the letters a, b, k, l as the basic letters. After that, just introduce other letters by adding the 4th point or 5th point or 6th point from Braille. Or as it is said Matsuda, the sender drops the left part of the Braille code on the distal interphalangeal joint (DIP) of the three fingers of the receiver, and then the sender drops the right part of the Braille code on the proximal interphalangeal joint (PIP).²² Meanwhile, *talaqqi* is a learning technique carried out by teachers in delivering the recitation of the Qur'an face-to-face (*musyāfahah* with children looking at the teacher's lip movements accurately).²³

Based on the results of the author's interview with the teacher who teaches the Qur'an Braille, the author finds that learning the Qur'an Braille is the same as learning Latin Braille. This is ultimately used as the basis for students to learn the Qur'an Braille easily.²⁴ Based on interviews with SDLB BUKESRA students Ulee Kareng as well as UPTD *Rumoh Sejahtra Beujroh Meukarya's* fostered children, the Braille reading and writing method has been introduced since students first entered SDLB BUKESRA.²⁵ However, in the lower classes, they were introduced to the Latin Braille alphabet first, only after that they were introduced to the Arabic Braille alphabet.²⁶ And from the results of observations made by the researcher, it was found that the teaching of reading and writing the Qur'an Braille has a special hour, namely 2 hours of lessons (1 hour = 40 minutes) for four days, from Monday to Thursday, so that students who study it can focus because learning to read and write the Qur'an Braille is not combined with other lessons so that students can focus and absorb the material taught.

Based on interviews with SDLB BUKESRA students Ulee Kareng as well as UPTD *Rumoh Sejahtra Beujroh Meukarya's* fostered children, the Braille reading and writing method has been introduced since students first entered SDLB BUKESRA. However, in the lower classes they were introduced to the latin Braille alphabet first, only after that they were introduced to the Arabic Braille alphabet.²⁷ Materials related to the Qur'an Braille are tajweed and tafsir for all classes of the visually impaired. Tajweed plays a very important role in the smooth learning process of tutoring, so that students can read the Qur'an Braille properly and correctly. The tafsir is taught so that students can not only read the Qur'an in Braille, but also know the meaning and explanation of the verses.²⁸

²² Yasuhiro Matsuda and others, 'Development of Finger Braille Recognition System', *Journal of Biomechanical Science and Engineering*, 5.1 (2010), pp. 54–65, doi:10.1299/jbse.5.54.

²³ Laili Nur Umayah and Muhammad Misbah, 'Implementasi Metode Talaqqi Dalam Pembelajaran Tahfidz Al-Quran Bagi Anak Berkebutuhan Khusus', *MAGHZA: Jurnal Ilmu Al-Qur'an Dan Tafsir*, 6.1 (2021), pp. 1–15, doi:10.24090/maghza.v6i1.4603.

²⁴ Interview with Juwairiah, Instructor of the Qur'an Braille UPTD Rumoh Sejahtra Beujroh Meukarya on August 23, 2023.

²⁵ Interview with Junaidi, Instructor of the Qur'an Braille UPTD Rumoh Sejahtra Beujroh Meukarya on August 23, 2023.

²⁶ Interview with Muskiati, a student of SDLB BUKESRA as well as a fostered child of UPTD Rumoh Sejahtra Beujroh Meukarya on August 22, 2023.

²⁷ Interview with Ishadi, a student of SDLB BUKESRA as well as a fostered child of UPTD Rumoh Sejahtra Beujroh Meukarya on August 23, 2023.

²⁸ Results of an interview with Mr. Junaidi, Instructor of the Qur'an Braille UPTD Rumoh Sejahtra Beujroh Meukarya on August 23, 2023.

Figure 1: Arabic Braille Letter ²⁹

| | | | | | | | | | | |
|---------|----|----|---|---|---|----|---|---|---|---|
| Print | ا | ب | ت | ث | ج | ح | خ | د | ذ | ر |
| Braille | ⠁ | ⠃ | ⠉ | ⠉ | ⠇ | ⠇ | ⠇ | ⠇ | ⠇ | ⠇ |
| Print | ز | س | ش | ص | ض | ط | ظ | ع | غ | ف |
| Braille | ⠵ | ⠰ | ⠰ | ⠰ | ⠰ | ⠰ | ⠰ | ⠰ | ⠰ | ⠰ |
| Print | ق | ك | ل | م | ن | ه | و | ي | ى | ة |
| Braille | ⠴ | ⠴ | ⠴ | ⠴ | ⠴ | ⠴ | ⠴ | ⠴ | ⠴ | ⠴ |
| Print | ال | لا | أ | إ | آ | أو | ؤ | ئ | ء | |
| Braille | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | |
| Print | ـ | ـ | ـ | ـ | ـ | ـ | ـ | ـ | | |
| Braille | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | ⠠ | | |

The form of the Arabic Braille formula is no different from the Latin Braille letters. The Arabic Braille alphabet consists of 6 dots that are read from left to right and written with a reglet from right to left. Thus, the way to number the dots is the same as Latin Braille. The form of the alphabetical formula of the Qur'an Braille writing as shown in the image quote below is a description of Arabic writings that are converted into embossed points using six base points (as in Latin Braille).³⁰

However, while the structural consistency of Braille is beneficial, the learning process reveals certain challenges that can hinder effective Quranic literacy³¹. One issue frequently reported by educators is the lack of tajweed markers in the Braille Qur'an. Unlike the printed Qur'an, where tajweed signs guide pronunciation and recitation, these indicators are often missing or inconsistently applied in Braille texts. As a result, students may struggle with accurate recitation, particularly in distinguishing between *wasal* and *waqaf* (continuous and stopping readings). For example, the absence of the "*Nun Wiqayah*" in Braille Qur'an material causes recurring errors, as students fail to recognize subtle pronunciation shifts required by tajweed rules. Furthermore, the tactile nature of Braille learning can make the memorization and application of complex tajweed rules challenging. Students often rely on repetitive correction and oral instruction from teachers to master proper recitation. This reliance on auditory feedback can slow down progress, as students are unable to independently verify their readings without tactile tajweed markers. Therefore, the *talaqqi* method, which involves listening to and repeating verses, remains a crucial but time-consuming component of Braille Qur'an education.

²⁹ Rubini and Setyawan, "Inclusion Education: Learning Reading Arabic Language And Alquran for Blind." AL-BIDAYAH: Jurnal Pendidikan Dasar Islam, Vol.1, Issue 2 (2020).

³⁰Arabic Braille in <http://www.keyword.suggestions.com/quranicalphabet/cXVyYW5pYyBhbHB0YWJldA/> accessed on August 9, 2020.

³¹ Che Mud, Sham, and Mohd Ali.

3. The Effect of the Use of the Braille Qur'an on the Ability to Read the Qur'an at SDLB BUKESRA Banda Aceh

According to Munawarman, the use of the Braille Qur'an has a significant impact on visually impaired students by enhancing their motivation and fostering confidence in reading the Qur'an, similar to individuals with normal vision. This effect is evident in students' responses at the beginning of each Braille Qur'an learning session, where they consistently demonstrate a positive attitude and enthusiasm, enabling them to quickly develop proficiency in reading the Qur'an in Braille.³²

From the results of the author's interview with Mrs. Juwairiyah as a Braille Qur'an reading and writing teacher, it takes an average of three months for students to master the Latin Braille letters, then converted into the Arabic alphabet which is also taught *syakal* and *tajwid*.³³ Contrary to this, there are still a small number of students who are still overwhelmed with Braille codes, their problem is that it is difficult to memorize the Braille letters. However, in learning the Qur'an Braille, students are very serious and enthusiastic in following the learning process until it is completed. Students are so active in the learning process that the average student quickly masters the Qur'an Braille both in terms of reading and writing.³⁴

This approach is closely linked to the methods employed by educators in engaging with students. If a student faces difficulties in absorbing lessons in the classroom, the teacher provides individualized guidance in the dormitory where the student resides, ensuring personalized support. This strategy is an integral part of the services provided for children with special needs (ABK). This information was obtained through interviews with students of SDLB BUKESRA, who are also under the care of UPTD *Rumoh Sejahtra Beujroh Meukarya*.³⁵

Field observations reveal a significant number of championship trophies from *Musabaqah Tilawatil Qur'an* (MTQ) competitions in Braille Qur'an reading and writing. This indicates that visually impaired students have successfully mastered reading and writing the Qur'an in Braille with accuracy and fluency, allowing them to be assessed at the school level and achieve commendable results. Furthermore, their proficiency enables them to compete at the MTQ stage. A notable example is Amirullah, a visually impaired student from SDLB BUKESRA who is also under the care of UPTD *Rumoh Sejahtra Beujroh Meukarya*. He recently secured 1st place in the MTQ competition held in Samahani City, demonstrating the effectiveness of Braille Qur'an education at the institution. The following author attaches a questionnaire related to the influence of the Braille Qur'an on the ability of students at SDLB BUKESRA Ulee Kareng which was taken from three Braille Qur'an teachers, namely Mr. Munawarman, Mr. Junaidi and Mrs. Juwairiyah:

³² Interview with Mr. Munawarman, Principal of SDLB BUKESRA Ulee Kareng on August 22, 2023.

³³ Interview with Mrs. Juwairiah, a Braille Qur'an instructor at UPTD Rumoh Sejahtra Beujroh Meukarya Ladong on August 23, 2023.

³⁴ Interview with Mr. Junaidi, a Braille Qur'an instructor at UPTD Rumoh Sejahtra Beujroh Meukarya Ladong on August 22, 2023.

³⁵ Interview with Ishadi, a student of SDLB BUKESRA as well as a fostered child of UPTD Rumoh Sejahtra Beujroh Meukarya on August 23, 2023.

Table 1. Questionnaires for teachers on the effectiveness of learning the Braille Quran.

| No | Question | STS | TS | S | SS |
|----|---|-----|----|---|----|
| 1 | Students are happy when the Qur'an Braille <i>lesson</i> is carried out. | | | 3 | |
| 2 | Students can quickly master the Qur'an Braille. | | | 3 | |
| 3 | Students can read the Qur'an Braille fluently without mistakes. | | 1 | 2 | |
| 4 | Students are still overwhelmed by reading the Qur'an because <i>the</i> Braille code is so complicated. | | 2 | 1 | |
| 5 | Students can participate in musabaqah reading/writing the Qur'an <i>in</i> Braille. | | | 3 | |
| 6 | Students achieve achievements in the musabaqah they have participated in | | | 3 | |
| 7 | The average student is classified as successful according to the Minimum Completeness Criteria (KKM) Standard set. | | | 3 | |
| 8 | The average achievement of students is satisfactory so the teaching of the Qur'an Braille at SDLB Bukesra can be said to be successful. | | | 3 | |

Note. STS: *Sangat Tidak Setuju* (Strongly disagree), TS: *Tidak Setuju* (Disagree), S: *Setuju* (Agree), SS: *Sangat Setuju* (Strongly Agree).

Based on the data from Table 1 of the questionnaire, the responses from the three Braille Qur'an teachers indicate a positive impact on the learning process. This is evident from the psychological aspects of the students, who demonstrate enthusiasm and happiness during learning sessions. Additionally, students successfully achieve the Minimum Competency Criteria (KKM) and attain notable accomplishments in their study of the Braille Qur'an, further confirming the effectiveness of the teaching methods employed.

4. Problems of Learning Al-Quran Braille in Students at SDLB BUKESRA Banda Aceh

According to the Principal of SDLB BUKESRA Ulee Kareng, Banda Aceh, the teaching and learning process of the Braille Qur'an does not encounter significant obstacles that threaten its continuity. However, due to space constraints, not all visually impaired students can be taught directly at the school. To address this challenge, SDLB BUKESRA collaborates with UPTD *Rumoh Seujahtra Beujroh Meukarya* in Ladong, which provides dormitory facilities and coaching programs for visually impaired students. In addition to learning the Braille Qur'an, students are also encouraged and guided to develop their talents and interests³⁶. For instance, they receive training in music and are nurtured to actively contribute to society.

³⁶ Interview with Amirullah, a student of SDLB BUKESRA as well as a fostered child of UPTD Rumoh Sejahtera Beujroh Meukarya on August 22, 2023.

Through this partnership, even though not all students are physically present at SDLB BUKESRA, the learning process remains effective. Moreover, students receive comprehensive guidance that nurtures their creativity, independence, and overall personal development. According to Mrs. Juwairiyah, a Braille Qur'an instructor, the learning process runs smoothly without major obstacles. However, there are specific challenges in teaching *tajweed*, as the Braille Qur'an lacks adequate *tajweed* symbols. For instance, the small “Nun” under the “Alif” used to indicate *wasal* in the printed Qur'an commonly known as “Nun *Wiqayah*” is absent in the Braille version. As a result, students often misread verses involving *wasal*. Teachers must frequently correct and remind students to read accurately. Therefore, further development in Braille Qur'an transcription is necessary to enhance the reading accuracy and accessibility for visually impaired students. This concern was also expressed by Mr. Junaidi, another Braille Qur'an teacher, who noted that although no significant issues disrupt the learning process, improvements are still needed.

Based on the above description, the Braille Qur'an education program at SDLB BUKESRA Banda Aceh represents a significant effort in empowering visually impaired students to independently access and learn the sacred text. The structured curriculum, gradual introduction of Braille, and dedicated teaching methodologies have produced positive results. However, to further enhance the program's effectiveness, there is a need for greater innovation in teaching strategies, extended instructional time, and integration of modern educational tools. Addressing these aspects will enable the program to better accommodate the diverse needs of students, ensuring not only their proficiency in reading and writing the Braille Qur'an but also fostering their holistic development and confidence as independent learners.

To address the challenges faced by both teachers and students in the Al-Qur'an Braille education program at SDLB BUKESRA Banda Aceh, several key solutions are proposed to enhance future learning development. First, increasing the availability of Braille Qur'an materials with complete *tajweed* indicators is essential to reduce errors in recitation and improve reading accuracy. Collaborations with specialized printing and educational institutions can help achieve this goal. Second, providing targeted training programs for teachers in Braille Qur'an instruction and modern teaching techniques can strengthen their capacity to address students' learning needs effectively. Third, integrating assistive technology, such as digital Braille devices and audio-visual aids, can offer a more interactive and engaging learning experience. Additionally, expanding instructional time and optimizing the curriculum to focus on both religious and life skills development will ensure a more comprehensive education. Finally, creating a support network of educators, parents, and stakeholders can foster collaboration and ensure ongoing improvements to the program, ultimately enhancing the independence, confidence, and Quranic proficiency of visually impaired students.

C. Conclusion

The findings indicate that Qur'anic Braille instruction at SDLB BUKESRA Banda Aceh has been largely effective. Students have demonstrated the ability to read and write the Braille Qur'an within an average of three months and have gained recognition through participation and success in Qur'anic Braille recitation competitions. These achievements

reflect the dedication of teachers, the use of tailored teaching methods, and the students' motivation to learn despite their visual impairments. However, three primary challenges persist in ensuring full accessibility and effectiveness. First, the limited availability of Braille Qur'an materials necessitates collaboration with UPTD *Rumoh Seujahtra Beujroh Meukarya*, which provides external dormitory and coaching support. Second, the lack of adequate space in the school prevents it from hosting all visually impaired students on-site, limiting in-person teacher-student engagement and continuity in learning. Third, the absence of standardized tajweed symbols in Braille Qur'ans significantly hinders students' ability to recite verses accurately. To address these challenges, several solutions are proposed. Increasing the availability of Braille Qur'ans with complete tajweed notations through partnerships with governmental and religious bodies is essential. Developing additional school infrastructure or satellite classrooms can reduce reliance on external facilities and strengthen face-to-face interactions. Finally, collaboration with experts in Islamic education and Braille technology is crucial to improve the quality of instructional materials and enhance teacher training in tajweed using both tactile and auditory strategies. This study contributes to the growing discourse on inclusive Islamic education by highlighting the practical successes and continued needs in Braille Qur'an instruction. It offers valuable insights for policymakers, educators, and religious institutions aiming to foster equitable and spiritually enriching learning environments for visually impaired students.

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