

CHAPTER 4

FINDINGS i: THE NEEDS AND THEORY OF COORDINATION

4.1 Introduction

This chapter explains the study's findings in order to answer the first to third research questions and achieve the study's objectives. The study's findings were derived from qualitative data collected through two methods: interviews and content text analysis. Data was obtained from interviews and analysis of the text of the Braille Quran for the first and second research questions related to the analysis of research needs, while a design towards the development of the text of the Braille Quran in accordance with the *muṣḥaf al-Madīnah* was theoretically implemented for the third research question.

4.2 The Needs to Coordinate the Texts of PERTIS Braille Quran with the Texts of *Muṣḥaf al-Madīnah*.

Consistency in the writing of al-Quran's *muṣḥaf* is a factor that adds to the *ummah*'s unity. Because of this factor, Saidina Uthmān RA has ordered the destruction of all

muṣḥafs except the ones he promulgated. To this date, there has not been any *muṣḥaf* publisher that prints Braille Qurans based on *Rasm ʿUthmānī* nor uniform with the traditional version. Because of the differences in *rasm* and *dabṭ* between the two *muṣḥafs*, users of Braille manuscripts cannot use the same learning syllabus as conventional learners. Inclusionary education is also hampered by this. Aside from that, this distinction causes the visually impaired to lag behind in their grasp of *muṣḥaf* writing. As a result of the consistency between the traditional *muṣḥaf* and the Braille version, visually impaired al-Quran readers will be able to increase their understanding of the al-Quran text, removing the double standard or gap between the typical and visually impaired.

There are differing viewpoints on the obligation of writing a *muṣḥaf* in *Rasm ʿUthmānī*. However, the majority of scholars believe that writing a *muṣḥaf* in *Rasm ʿUthmānī* is required, and that violating it is even haram. This is *jumhur*'s point of view. In fact, some *ulama* believe that this viewpoint is widely held. The following are some examples of narratives that support this point of view:

A narrative by Abu ʿAmr al-Dani from Imam Malik R.A.: “*Imam Malik was asked - What is your opinion on the muṣḥaf’s writing at this time, and can it be written in the latest and current spelling? He responded, “I believe the muṣḥaf should be written in accordance with the first writing, which is the writing written by the writers of revelation.”*”

Al-Sakhawi confirms this viewpoint by saying: “*The opinion by Imam Malik is valid because the original writing of al-Quran will be preserved in this way*”. Al-Dani (2016) after quoting Imam Malik’s narration declared that it is a consensus with his statement: “All scholars concur with this opinion”.

The opinion by Imam Malik is aligned with the ulama in Hanafi school, as stated in *al-Muḥiṭ al-Burhani* – a reference book of jurisprudence in the Hanafi school: “*It is forbidden to write a muṣḥaf with any other spelling than Rasm ‘Uthmānī*”.

For the Hanbali school, Imam Ahmad bin Hanbal himself asserts: “*It is haram to violate the spelling of ‘Uthmānī muṣḥaf on the letters of ي, ا, و, or other letters*”.

Besides that, Imam al-Bayhaqī affirms: “Anyone who writes *muṣḥaf* should use the same spelling as the *muṣḥaf*. Do not violate them or change what they write because they have greater knowledge, their hearts and words are more true, and they are stronger in retaining trust, therefore, we should not feel ourselves superior to them.”

Recently, Mujamma’ Malik Fahd, the world’s largest producer of *muṣḥaf* s, supported and followed the stand of these ulama, citing Fatwa Council of Ulama of Saudi Arabia, no. (71), dated: 21/10/1399H: “Indeed, keeping the writing of the *muṣḥaf* with this spelling, *Rasm ‘Uthmānī*, is a rule since it is based on the consensus of Uthmān and Ali and the companions and is implemented based on their consent.”

4.2.1 The Views of Braille Quran Users on the Coordination of the PERTIS Braille Quran with the Standard *Muṣḥaf* by Mujamma’ Malik Fahd (*Muṣḥaf al-Madīnah*)

Allah SWT outlines directions in al-Quran for the reader to collect information from people who have it through inquiry and investigation methods. This is related to the term ‘*tabayyun*’, which appears three times in al-Quran. Two of them are mentioned in *surah an-Nisā*’ verse 94:

يَأْتِيهَا الَّذِينَ ءَامَنُوا إِذَا ضَرَبْتُمْ فِي سَبِيلِ اللَّهِ فَتَبَيَّنُوا وَلَا تَقُولُوا لِمَنْ أَلْفَىٰ إِلَيْكُمْ السَّلَامَ

لَسْتَ مُؤْمِنًا تَبْتَغُونَ عَرَضَ الْحَيَاةِ الدُّنْيَا فَعِنْدَ اللَّهِ مَعَانِمٌ كَثِيرَةٌ كَذَلِكَ كُنْتُمْ مِّن قَبْلُ

فَمَنَ اللَّهُ عَلَيْكُمْ فَتَبَيَّنُوا إِنَّ اللَّهَ كَانَ بِمَا تَعْمَلُونَ خَبِيرًا ﴿٩٤﴾

Meaning: "O believers! When you struggle in the cause of Allah, be sure of who you fight. And do not say to those who offer you 'greetings of' peace, "You are no believer!"—seeking a fleeting worldly gain.¹ Instead, Allah has infinite bounties 'in store'. You were initially like them then Allah blessed you 'with Islam'. So be sure! Indeed, Allah is All-Aware of what you do." (Al-Qur'an. An-Nisā' 4: 94)

Besides the above verse, the term 'tabayyun' was also mentioned in verse 6 of *surah al-Hujurat*:

يَأْتِيهَا الَّذِينَ ءَامَنُوا إِنْ جَاءَكُمْ فَاسِقٌ بِنَبَأٍ فَتَبَيَّنُوا أَنْ تُصِيبُوا قَوْمًا بِمِجْهَلَةٍ فَتُصْحَبُوا عَلَيَّ

مَا فَعَلْتُمْ كَذٰمِينَ ﴿٦﴾

Meaning: "O believers, if an evildoer brings you any news, verify 'it' so you do not harm people unknowingly, becoming regretful for what you have done." (Al-Qur'an. Al-Hujurat 49:6)

It is obvious from the preceding verses that al-Quran follows a definite principle in collecting information, which is investigation. It is highly possible that someone who wants to make a decision will not be able to gather complete and unbiased information

without conducting an investigation. This will undoubtedly impact the conclusion and action to be done.

In this study, the researcher employed the '*tabayyun*' approach to gather information on the existence of inconsistencies, issues, and consequences, as well as the real needs resulting from the discrepancy between the text of the Braille Quran and the *muṣḥaf al-Madīnah*. To employ this '*tabayyun*' approach, the researcher has opted to conduct an interview with users of the Braille Quran. The interviews were performed using the concept of needs analysis derived from the perspective of research participants as a sample of the users of the Braille Quran.

Needs analysis, according to Witkin (1997), is a method for determining the gap between the existing state and the desired state. According to McKillip (1997), needs analysis is the value of judgement for certain groups that have issues that need to be addressed. The needs analysis in this study aims to investigate current challenges and the necessity to coordinate the text of the Braille Quran with the *muṣḥaf al-Madīnah*. The planned coordination would fix current problems, fulfil existing needs, and be able to bring benefits to users of the Braille Quran, particularly in terms of recitation. In this study, needs analysis will be undertaken using the interview technique to determine the need for coordination to harmonise the text of Braille Quran with *muṣḥaf al-Madīnah* from the perspective of Braille Quran users, which include the visually impaired and Braille Quran teachers.

To achieve this objective, research participants must be interviewed and asked the following questions:

1. What is the difference between the texts of the Braille Quran with *muṣḥaf al-Madīnah*?

2. What are the concerns that occur as a result of the textual variations between the Braille Quran and *mushaf al-Madīnah*?
3. Is it necessary to coordinate the text of the Braille Quran and *mushaf al-Madīnah*?

4.2.1.1 Research Findings of the Interviews

Before providing the findings of interviews in this research, the researcher commences this section by explaining the research participants' backgrounds. This research had a total of seven participants. Based on the necessity to answer the study questions, all participants cooperated well.

The selection of research participants was heavily influenced by their levels of involvement and experience in using Braille Quran, as well as their experience as Braille Quran teachers to the visually impaired community for at least five years. The researcher did not limit the research participants' selection merely based on academic level and achievement because there are potential candidates who do not have high academic qualification but have long and extensive experience using Braille Quran and have been experimenting with their teaching process repeatedly.

The research participants' background information focused on the experience of utilising the Braille Quran, the experience of teaching the Braille Quran to the visually impaired, and the level of education.

Table 4.1: Details of Research Participants

Research Participant	Name	Visual Classifications	Academic Levels	Backgrounds	Experience in Utilising Braille Quran
1	Zakri	B1	Certificate in Teaching Degree in Social Science	Retired Teacher	Over 40 years
2	Zamri	B1	Master's degree	NGO activist	Over 30 years
3	Bahri	Typical	Lower Certificate of Education (SRP)	Retired soldier	10 years
4	Ahmad	B2	Form Six	PWD's Quranic teacher	Over 40 years
5	Suhaimi	B2	Higher Certificate of Education (STP)	KAFA teacher	Over 20 years

6	Faizal	B1	Diploma in Tahfiz	Quranic teacher	Over 15 years
7	Syahid	B1	Certificate in Tahfiz	Religious teacher	Over 15 years

Source: Interviews with research participants

Participants in this study were assigned a pseudonym. The pseudonym approach (Linda Dale, 2008; Merriam, 2008) involves linking the real name with the name to be assigned in order to make the process of identifying the original name easier (Zanaton, 2011). Furthermore, by using a pseudonym, the true identity of research participants may be kept hidden from the general public.

The seven participants in this study are teachers who have used Braille Quran for more than ten years and are also experienced in teaching Braille Quran to the visually challenged community. The seven teachers who participated in this study were given pseudonyms by the researcher: Sir Zakri, Mr Zamri, Ustaz Bahri, Ustaz Ahmad, Ustaz Suhaimi, Ustaz Faizal and Ustaz Syahid. Four of the research participants' backgrounds are described in the following study data:

a. Background of the first research participant - Sir Zakri

Sir Zakri, 66, is a retired teacher. His ability level is B1, which denoted total blind. He currently resides in Seberang Takir, Kuala Terengganu, and possesses a bachelor's degree in Social Sciences from the University of Malaya, which he earned in 1980. He attended the Sekolah Kebangsaan Pendidikan Khas (SKPK) Princess Elizabeth, Johor Bahru in his childhood. He continued his education after finishing primary school in

Sekolah Sultan Sulaiman Kuala Terengganu. He was awarded the Terengganu PWD Figure in 1985. He was also awarded the Teacher Figure in Sekolah Ibrahim Fikri Kuala Terengganu in 1999. Meanwhile, in 2005, he received the Terengganu State Outstanding Teacher award. He was awarded the National Outstanding Teacher a year later. Also at the national level, he was awarded the National PWD Figure in 2003. In addition, he received the Sijil Ulum Quran from the Terengganu Quran Institute in 2014. MAIDAM awarded him a certificate to teach al-Quran the next year. He is also the founding member of the Society of the Blind, which was founded in 1983. He is presently an active al-Quran teacher at the Islamic Malaysian Association of the Visually Impaired's al-Quran school in Terengganu. He has been teaching the Braille Quran for around six years.

Sir Zakri is a very pleasant individual. He was no trouble for the researcher to interview. Sir Zakri, according to the researcher, is a person with a remarkable soul as an educator. He still uses his teaching experience when delivering the Braille Quran teaching to this day, owing to the teacher training he received while holding the role of teacher. He also has a strong interest in science. His closest friend is books, despite the fact that he is completely blind. He was never satisfied with Braille books and would always urge his wife to recite reading materials so that he might learn new things, especially those linked to his teaching sessions in the Braille Quran study class.

He was given the responsibility of leading a group of six to seven students in a Braille Quran study class. One of his six students, interestingly, is a typical student. This demonstrates that he has the capacity, skills, and experience to communicate Quranic lessons to both audiences. His coaching sessions take place on Sundays and Mondays twice a week. He put a lot of emphasis on the translation and interpretation of Quranic

verses, in addition to studying the recitation of al-Quran by his students. As a result, he will review the relevant interpretations in preparation for the forthcoming session, which he will share with his students as supplementary information. Giving added value to his students is what he prioritises, according to him. The reading done before the teaching session is essential for applying additional information to the understanding of the Quranic verses recited during the study session.

The researcher was able to conduct formal interviews with him twice, the first on June 24, 2018, and the second on February 26, 2019.

b. Background of the second research participant - Mr. Zamri

Mr. Zamri is the study's fifth participant. When the researcher met him for the interview, he was 44 years old. He is a B1 visually impaired since childhood. He recently lived in his apartment in Petaling Jaya, Selangor. Professionally, he worked as an operations manager for the Malaysian Association of the Visually Impaired (PERTIS), a well-known NGO in the visually impaired community.

In terms of academics, he obtained his early education at the Sekolah Kebangsaan Pendidikan Khas (SKPK) Princess Elizabeth, Johor Bahru from grade one until grade six. At the same time, he was enrolled in the Sekolah Agama Puteri Elizabeth, which was conducted during the afternoon school session. He came to Kuala Lumpur in 1988 and attended Sekolah Menengah Sri Titiwangsa, under an integrated stream, till completing form five. In 1994, he continued his studies at Saint John School in Kuala Lumpur till he completed form six. The next year, he resumed his studies at the University of Malaya, one of the country's major universities. He earned his

bachelor's degree in sociology. After graduating from the undergraduate level in 1999, he completed his studies in the field of counselling at the master's level at the same university from 2001 to 2005.

Since he was in school, he has been involved in the subject of Braille Quran teaching. As a learned Braille Quran user, he is used to sharing his knowledge and skills of reciting the Braille Quran with friends in need. Despite his lack of professional training in the teaching and study of the Braille Quran, he actively teaches the Braille Quran to the visually impaired community, as well as attending invitations from other parties to teach the general public the basics of Braille. Some of his students visit him on a regular basis, and some students even invite him to their homes. Encik Zamri has also been designated as one of the Braille Quran instructors by the Selangor Islamic Religious Department (JAIS), with hundreds of adult students from the surrounding areas attending weekly courses at the JAIS Shah Alam premises. Since the COVID-19 outbreak ravaged the country, JAIS's Braille Quran class has come to a halt. In 2017, the Hulu Langat OKU Berdaya Association in Bandar Baru Bangi, Kajang, invited him to offer basic lessons and introductions on Braille writing and the Braille Quran to the typical community as part of an awareness programme. With the guidance and cooperation of students from Universiti Kebangsaan Malaysia (UKM) who functioned as facilitators and volunteers, the programme ran in several series throughout the year.

Since 1996, Mr. Zamri has been a member of the Malaysian Association of the Visually Impaired (PERTIS). In the year 2000, he was entrusted as the association's committee member. Before becoming the association's operations manager today, he was entrusted several positions at PERTIS such as the Education and Da'wah bureau

(2000-2001), Treasurer (2002-2004) and (2007-2010), and Vice President (2007-2010) and (2011 -2018).

Mr. Zamri is also the president of the Malaysian Islamic Light Association, in addition to PERTIS. This group consists of both visually impaired and physically challenged people. His contributions did not end there; the Ministry of Women, Family and Community Development (KPWKM) appointed him as an auditor to inspect infrastructure and facilities for the disabled in mosques and buildings around the Klang Valley.

The researcher had the opportunities to formally interview him twice, the first on December 27, 2019, and the second time on November 7, 2019.

c. Background of the third research participant - Ustaz Bahri

Born in Perak. 57 years-old. For the past 40 years, he has been living in Terengganu. Currently, he lives in Kampung Baru Seberang Takir. He is in the typical status and does not have any visual impairments. An SRP (Lower Certificate of Education) leaver. In the beginning, he learned al-Quran recitation and religious knowledge from lessons he attended in mosques and suraus. He was once a soldier.

He currently serves as an *imam* at the Bangor Pauh mosque. Every night, he teaches al-Quran (7 nights a week). Under the direction of the previous Terengganu Menteri Besar, he also conducts youth classes at Yayasan Islam. In his Quran teaching classes, he emphasises four aspects: recitation, pronunciation, *tajweed* and delivery skills. Over ten years of experience teaching the visually impaired at the Malaysian

Association of the Visually Impaired Terengganu branch in Seberang Takir, Kuala Terengganu. He has more than fifteen years of experience teaching typical students. Around 2014-2015, he obtained a special award from PERTIS.

The researcher had the opportunities to conduct formal interviews with him twice, the first on June 23, 2018, and the second on February 25, 2019.

d. Background of the fourth research participant - Ustaz Ahmad

Ustaz Ahmad is the study's fourth participant. He is 65 years old. He has had eye problems since he was a child, having been born in Besut in 1954. Despite this, he is still able to see at a very slow rate and recognise colours and large objects. He went to a mainstream national school for his early schooling. During the afternoon sessions of secondary school, he also took classes at religious schools. In the evenings, he went to Pondok Madrasah Majdiyyah in Melor to study. From the transitional form to form 3, his routine continues. He pursued his education at the Kota Bharu Islamic Teachers College after passing the Lower Certificate of Education examination in form three. He completed his secondary study up to form six at this college. Ustaz Ahmad had to put his education on hold after completing form six due to financial difficulties he was experiencing at the time.

He had the opportunity to take an agriculture course at the Agricultural Training Centre in Taman Harapan Temerloh shortly after. His destiny improved when he was offered to study in Indonesia, namely at the Yayasan Kesejahteraan Tunanetra Islam (YAKETUNIS) in the Jogjakarta province. The foundation is Indonesia's largest Islamic organisation for the blind and visually challenged. He studied Quran recitation

as well as other areas in Islamic studies such as Quranic Studies, *tafsir*, *hadith*, and Braille techniques of reading and writing al-Quran. Aside from that, the students at the foundation were also exposed to the Braille Quran teaching method.

He was commissioned by the Islamic Centre to re-copy the text of the al-Quran *mushaf* into Braille upon his return to Malaysia from Indonesia in 1980. The project was carried out in collaboration with a Braille book printing company and lasted 5 years (1980-1985).

Ustaz Ahmad moved to Brunei after completing the work. He began his service in that country in 1986 and worked as a Braille Quran instructor there for the next 26 years, from 1986 to 2012. When he returned to Malaysia, he resumed his service. He began teaching Braille Quran to the visually impaired in classes provided by the Malaysian Association of the Visually Impaired (PERTIS) at the Malaysia Association for the Blind (MAB) building in Brickfields Kuala Lumpur. Apart from that, he was also appointed to teach the Braille Quran at the government building in Kampung Mambang Berulang, Temerloh district, which had been donated to PERTIS Pahang Branch. He has been assigned to numerous roles in the organisation, including as the coordinator of the PERTIS Pahang branch, in addition to teaching al-Quran. He is also the Director of the Bureau of Welfare and Community Services for the Visually Impaired at the national level.

His services and experience were not limited to transcribing al-Quran into Braille; he also translated over a hundred titles of religious publications and booklets, most of which were fundamental necessities and requests from readers. Based on his extensive experience, in 2017, he was appointed to the committee for the development of the Braille Al-Quran Teaching Skills Standard Certificate for the Malaysian Skills

Certificate programme under the Department of Social Welfare at the Ministry of Human Resources.

The researcher had the opportunities to conduct formal interviews with him twice, the first on June 27, 2018, and the second on February 27, 2019.

e. Background of the fifth research participant - Ustaz Suhaimi

Ustaz Suhaimi is one of the individuals who has given a great deal of time and effort to the field of Braille, particularly the Braille Quran. He was born in 1974 and is a Malay. Since he was two years old, he has struggled with visual impairments. He was born in Kedah and has since lived in Batu Caves, Selangor, and Desa Pinggiran Putra, Kajang, Selangor.

When he was two years old, he got a severe fever and was diagnosed with visual issues. His family, who lived in a village with few amenities and a long distance to the nearest hospital at the time, assumed he had a common high fever. He still has some residual vision, although it is fuzzy and limited. He was 41 years old when he met his wife in 2015. His wife is free from visual impairments and their marriage has been blessed with a daughter.

Ustaz Suhaimi had his early schooling at Sekolah Kebangsaan Anak-Anak Angkatan Tentera, Jitra, Kedah. He was admitted to the primary school like any other normal kid because he could still see despite his vision being a little blurry at the time. Ustaz Suhaimi was admitted to the Sekolah Pendidikan Khas in Penang after it was verified that he had entirely lost his sight. After completing his primary school

education, he continued his studies at the secondary school level. From form one to form three, he continued his studies in Sekolah Integrasi Kedah.

In 1990, he resumed his education at the Sultan Abdul Hamid College in Alor Setar, Kedah, from form four to the Malaysian Higher Education Certificate (STPM) level. Because of his vision problems, he had to conceal his urge to continue his education at a higher level. His sustenance, on the other hand, was composed afterwards so that he may continue his studies at a *tahfiz* facility. According to Ustaz Suhaimi, he began studying and using the Braille writing system informally through friends and teachers who are Braille experts.

He relocated to Kuala Lumpur in 2012 after graduating since he had been offered a job there. A job as a Braille book editor at Kuala Lumpur Braille Resources, Sentul, is one of the positions offered to him. He not only became a textbook editor for primary school textbooks, but he was also involved in textbook editing for secondary school textbooks.

Ustaz Suhaimi has worked as a Braille editor as well as an educator at several institutions and schools. The Community Rehabilitation Centre (PPK) and the Special Education Secondary School in Setapak are two of the facilities and schools that give him teaching positions. He is only a part-time teacher at the Community Rehabilitation Centre. He teaches Islamic education subjects such as *Iqra'* and al-Quran in Braille at Setapak's Special Education Secondary School. The majority of his students are between the ages of two and six.

Due to his desire to expand Braille knowledge, Ustaz Suhaimi has been active in editing the handbook of the Braille Book learning. This book is designed to assist and

facilitate persons who are blind or have vision issues. This book is written to encourage Muslims to read and study al-Quran in the same way that normal persons do.

Apart from the Braille learning handbook, Ustaz Suhaimi also publishes religious literature such as guidebooks on the *Dhuha* prayer, *Tasbih* prayer, and *Musafir* prayer, as well as their translations. He explained that he was also active in making copies of *Yassin*, *Tahlil*, Imam Nawawi's 40 Hadith, and *Al-Mathurat* when asked about his involvement in the other area of the Braille world. These manuscripts, regardless, are still in the process of being published. Each copy made will be sold by himself.

The researcher had the opportunities to conduct formal interviews with him twice, the first on July 29, 2018, and the second on October 24, 2019.

f. Background of the sixth research participant - Ustaz Faizal

Ustaz Faizal is the study's sixth participant. He is a Quran instructor who is 34 years old. On May 8, 1998, he was born in the Malaysian state of Kelantan. Despite his short-sightedness, he was endowed with eyesight at a young age. However, at the age of 15, his vision was deteriorating, and by the age of 16, he had reached B1 status, which means he was completely blind.

He attended the Pusat Asuhan Tunas Islam (PASTI) in Mulung district for pre-school education. After that, from 1995 to 2000, he went to Sekolah Kebangsaan Mulung 2 for grades one through six. In 2001-2003, he attended Sekolah Menengah Kebangsaan Mulung to complete his secondary school. After losing his sight totally, he transferred to Setapak Kuala Lumpur Special Education Secondary School, which was

more suited to his needs. He attended the school for three years and sat for form five for two years in 2005-2006. After completing form five and sitting for the Malaysian Certificate of Education (SPM) examination at the school, Ustaz Fadhil relocated to attend Sekolah Menengah St. John in Bukit Nenas, Kuala Lumpur, to continue his education in form six for two years in 2007-2008.

He was blessed in the coming year to further his studies in al-Quran tahfiz. In 2009, he was accepted to Darul Quran JAKIM for the Tahfiz OKU Certificate. From 2010 to 2013, he pursued his tahfiz studies at the same institution until the diploma level.

He now lives with his family, which consists of his father, mother, and a sister after graduating. He, like his younger sister, is still unmarried. He worked as an al-Quran teacher at his current location of origin.

As a visually impaired, he begins using the Braille Quran in 2004. He has also been an educator for the visually impaired at the al-Quran study centre run by the Islamic Malaysian Association of the Visually Impaired Pahang branch during his 16 years of engagement with the Braille Quran. He is now a member of the PERTIS Braille Quran writing committee, as well as a member of the Braille Quran *Lajnah Tasheh* under the Ministry of Home Affairs' (KDN) Al-Quran Printing Control and Licensing Board (LPPPQ).

The researcher had the opportunities to conduct formal interviews with him twice, the first on June 30, 2019, and the second on October 3, 2019.

g. Background of the sixth research participant - Ustadz Syahid

Ustadz Syahid is the study's seventh participant. He was born in Alor Setar, Kedah, on October 4, 1992. He had a left eye as a kid that could still see objects at close range. He used to be perceptive of colours and light. His vision became increasingly blurry, and a corneal problem in his left eye eventually caused him to lose 100% of his vision, similar to his right eye, which had been completely defective from birth.

He received his early education at Sekolah Kebangsaan Jabi, Pokok Sena starting from standard 1 in 1999 until standard 4 (2002) up to 10 years old. He then transferred to Maahad Tahfiz Al-Munir in Bukit Pinang, Kedah, in 2003. He focused on the syllabus connected to the field of the Quran when he was there. In addition to being taught reciting skills, he also memorised the Quran until *khatam* in June 2007.

After that, from July to December of the same year, he went through the retention phase of verses he had memorised. This is in order for him to be able to pursue his education at a higher level, as he intended. He then moved to South Africa in January 2008 to finish his education at Madrasah An-Nur for the Blind. He spent 5 years there learning about the Quran and Islamic *Shariah*, including *Tafsir*, *Hadith*, *Fiqh*, *Nahu*, *Sorf*, and other disciplines (from 2008 to March 2013). Although the study period at the madrasah was originally four years, he had to extend his studies because he had to return to Malaysia to see his ailing mother in 2012. He returned to finish up his studies there until graduation the following year.

He has been familiar with the use of the Braille Quran since beginning his studies at Maahad Tahfiz Al-Munir in Bukit Pinang. With the help of the Braille Quran, he memorised the Quran there. He learned how to read al-Quran in Braille from an *ustazah*

when he was still in primary school. Interestingly, despite using the Braille Quran as a recitation and memorisation book, his *tasmik* teacher at the *maahad* was untrained in the usage of Braille, and his teacher even conducted *tasmi'* activities on him using the *muṣḥaf al-Madīnah*.

In reality, he is the only visually impaired person in the *maahad*. He was assigned to a normal class of students. However, things began to change once he visited South Africa's Madrasah An-Nur for the Blind. He had the opportunity to learn in a classroom with other visually challenged people at the institution. The teachers who teach them, on the other hand, are from the normal group.

After returning to Malaysia in 2013, he returned to Maahad Tahfiz al-Munir to serve as a *tasmi'* teacher. Besides that, he obtained teaching experience at the *maahad*. Another *maahad*, Maahad Tahfiz Saidina Abu Bakar, also in the state of Kedah, offered him a job as a teacher seven months later. He had accepted the position and had served there for several months. He also served at Maahad Tahfiz Al-Ansari in Ipoh till 2018, in addition to the two *maahad*. His students were from the normal group during his time as a teacher in these *maahad*. Despite so, he continues to use the Braille Quran as his major reference material and teaching aids in his classes.

Presently, he is an instructor at the Perak branch of the Malaysian Association for the Blind (MAB). At this institution, he is no longer a *tahfiz* teacher for students who memorise al-Quran, but he is in charge of teaching visually impaired students the guide of using the Braille Quran, from how to recognise the letters of al-Quran to the method of reciting the Braille Quran in its entirety. Taking into account his qualifications and expertise, the MAB of Perak has designated him as an instructor, whose duty includes not only teaching but also acting as a trainee for visually impaired

adults, teenagers, and children at various levels. Apart from individuals who have been blind since birth, his trainees include those who are diagnosed with visual issues in adulthood and old age, and even those who lose their sight due to disease, accident, or other causes.

The researcher was able to conduct formal interviews with him twice, the first on June 30, 2019, and the second on October 3, 2019.

4.2.1.1.1 Differences between Braille Quran with *Muṣḥaf al-Madīnah*

The first research question, based on data from interviews, focuses on the research participants' perspectives, namely Cikgu Zakri, Encik Zamri, Ustaz Bahri, Ustaz Ahmad, Ustaz Suhaimi, Ustaz Faizal and Ustaz Syahid, on the differences between Braille Quran with *muṣḥaf al-Madīnah*.

Table 4.2: Objectives and Research Questions.

No.	Research objectives of needs analysis	Research questions
1.	To analyse the perspectives of the visually impaired as users of Braille Quran on the needs to coordinate Braille Quran with <i>muṣḥaf al-Madīnah</i> in terms of <i>rasm</i> and <i>ḍabṭ</i> .	What are the viewpoints by the visually impaired as users of Braille Quran on the needs to coordinate Braille Quran with <i>muṣḥaf al-Madīnah</i> in terms of <i>rasm</i> and <i>ḍabṭ</i> ?

The researcher has found many concerns linked to the disparities between the text of the Braille Quran and *muṣḥaf al-Madīnah* in order to answer this question. The researcher also asked specific questions, such as “what is the difference between the Braille Quran and the *muṣḥaf al-Madīnah*?” to help address this issue.

Table 4.3: Summary of themes, subthemes and sub-subthemes for the category of differences between the texts of Braille Quran and *muṣḥaf al-Madīnah*.

Category	Themes	Subthemes	Sub-subthemes
Difference s between Braille Quran with <i>muṣḥaf al- Madīnah</i>	Writing methods	<i>Rasm ʿUthmānī/ Imlāʿi</i>	<i>Ibdal</i> letters to <i>waw</i>
		<i>Ḍabt</i> , symbols	Lower <i>nūn</i> , <i>nūn sākinah</i> , <i>tanween</i> , <i>iqḷāb</i> , vowel signs before <i>madd</i> , <i>ṣifr mustatīl</i> , <i>madd</i> signs, lower <i>ṣad</i> , small <i>alif</i> on <i>lafz al-Jalālah</i> , lower <i>sin</i> above/below the words, omitted <i>nūn</i> signs, parallel and non-parallel <i>tanween</i> , <i>mīm iqlāb</i> , <i>imālah</i> , <i>ishmām</i> , <i>tashīl</i> .
			Designations of <i>waqf</i>
			Marking of <i>juz</i>
	Physical size	Braille Quran is bigger	6 volumes
			More paper
	Cost	Braille Quran is more expensive	<i>Imlāʿi</i> Braille Quran is more economical

Source: Interviews with research participants

Three main themes, five subthemes, and nine sub-subthemes were discovered mentioned by the research participants pertained to their understanding of the distinctions between Braille Quran and *muṣḥaf al-Madīnah* after analysing and coding using open coding, side coding, and selective coding. The three themes are: i) Writing methods, ii) Physical size, and iii) Cost. The subtheme for the first theme, which is the differences in writing methods, consists of i)

Rasm ʿUthmānī/Imlāʿi, ii) *ḍabt*/symbols and iii) *fawāṣil*, while the second theme, which is the differences in terms of size, comprises the subtheme of Braille Quran is bigger

than *muṣḥaf al-Madīnah*. The third theme, which is cost, entailed subthemes of the expensive price for Braille Quran (compared to *muṣḥaf al-Madīnah*).

There are differences between the Braille Quran and the *muṣḥaf al-Madīnah*, according to all research participants. The researcher discovered that all seven research participants recognised and understood the differences between the two versions of the *muṣḥaf* in this study. Despite the fact that six of the participants in this study are blind, they are able to provide comments and information on the topic since they have extensive knowledge of the *muṣḥaf al-Madīnah*. This characteristic can be attributed to their prior experience and direct involvement in religious activities as well as Quranic lesson.

4.2.1.1.1 Writing Methods

The method of writing is the first theme that responds to the study's question. This subject refers to the writing process or system used in both forms of the *muṣḥaf*. It does not refer to differences in the shape of the letters used, such as Braille letters versus printed letters, but rather to the letters used (matching between original letters and letters transcribed into Braille), the way the letters are arranged to form each word in al-Quran, and the markings used and how they are applied.

There were differences in the angle of writing between the Braille Quran and the *al-Madīnah*, according to all seven research participants. The distinction in dispute concerns the *muṣḥaf*'s writing system, specifically whether it is written in *Rasm ʿUthmānī* or not. Four of the research participants used the terms *Rasm ʿUthmānī* and *Rasm Imlāʿi* to characterise the differences, while the other three simply described the

differences. Sir Zakri noted that he would teach two different things to his typical students who used the *muṣḥaf al-Madīnah* and the visually challenged students who used the Braille Quran.

According to Cikgu Zakri, the distinction is in the employment of symbols that are partially lacking in the Braille Quran but are present in the *muṣḥaf al-Madīnah*, as he put it; “*Actually we teach two different things. Aaa Ustaz Adzam eh... This thing, the Quran Braille its, it has aaa symbols right. Haa, for example, if we teach ordinary people, ordinary people see that there is a tiny nūn and he already knows what to pronounce, there is a tiny nūn, he already knows what to pronounce, but it is not there in Braille, and if we want to pronounce, haa, what is this rule? If, if you see when what is this, nūn sākinah or tanween followed with ba what is the rule? Right? A sighted person does not know what iqlāb is, but he says it right. Isn't it? Haa it is an aid in the form of letter.*” (Sir Zakri/IV)

In terms of writing, Ustaz Zamri believes there are discrepancies between the two versions of the *muṣḥaf*. He said that the *Imlā'ī* method was used to write the Braille Quran, whereas the *Rasm 'Uthmānī* method was used to write the *muṣḥaf al-Madīnah*. His comment makes this apparent; “*In Malaysia, In terms of the Braille Quran, it is Imlā'ī and the Quran for the sighted, it is 'Uthmānī. Haa just in terms of vowel lines, if it is Imlā'ī, they will not have the lines that look like the madd letters, all the top lines and bottom lines are not present, that means they will write the lines... that means aaa so, maybe for the user of Rasm Imlā'ī, they might face slight delay if want to synchronise with Rasm 'Uthmānī.*” (Ustaz Zamri/IV)

Similarly, Ustaz Bahri said unequivocally that the difference between the Braille Quran and the *muṣḥaf al-Madīnah* is a matter of *rasm* distinction, namely that the

Braille Quran is written with *Rasm Imlā'i*, whilst the *muṣḥaf al-Madīnah* is written with *Rasm ʿUthmānī*. He affirms, “The difference is from rasm, from rasm. Braille adopts *Rasm Imlā'i*, so me, as it is different from *Rasm ʿUthmānī*, so it is easy for me to explain. Aaa what kind of form and they would not even understand if I explain aaa the form of aaa ʿUthmānī haa.” (Ustaz Bahri/IV)

In addition, Ustaz Ahmad asserted that there are variances in writing styles without quoting the terms *Rasm ʿUthmānī* or *Rasm Imlā'i*. By comparing the spelling of the letters *ba* and *alif*, he demonstrated the difference in how the line should be placed before the *madd* letter. The line of *fathah* above the letter *ba* is not present in the Braille Quran, despite its presence in the *muṣḥaf al-Madīnah*. This can be seen in his statement: “Haa if aaa Braille Quran, if it is the Quran we use now, it is different. For example, aaa if ba, if the ordinary Quran usually aaa ba alif, there is a line above, haa if Braille we use ba alif only ba.” (Ustaz Ahmad/IV)

In his comments, he added another sub-theme to the differences in writing approaches by citing the lack of the *madd* sign in the reading of *madd wājib muttaṣil* or *madd jāiz munfaṣil*: “Markings of aa madd wājib, madd wājib or madd jaiz in the Quran for the sighted there is a long horizontal mark on the alif, isn't it? Like 'syaa_a' on alif there is a long horizontal mark, yet we still do not have it, we are based on what followed after 'syaa'. If there is a long hamzah, 'laa', haa if there is a hamzah in the word then it is madd wājib muttaṣil, if another word 'sya_aaa', 'maa unzila', haa it is aa madd jāiz munfaṣil. Haa so that is merely based on what follows after.” (Ustaz Ahmad/IV)

Ustaz Suhaimi also admitted that the Braille Quran's writing method is based on *Rasm Imlā'i* writing method. His comment makes this apparent; “In terms of writing, it is clear, it is clear that the Braille Quran is more toward *Imlā'i*, then there are some

other markings in Rasm ‘Uthmānī not found in Braille Quran. The easiest example is that the tiny mīm does not exist, the tiny mīm then what is the sign... what is the sign of the buzz ‘enn’ the sign of ikhfa’, iqlāb does not exist, the tiny mīm then the tiny sod, there are many more. It is different with the Quran, it is obvious, obviously in terms of writing the Braille Quran and the Rasm ‘Uthmānī Quran is different.” (Ustaz Suhaimi/IV)

Ustaz Faizal, the sixth research participant, went into great detail about the sub-subthemes of the differences in this writing method. In giving examples, he offers some practical instances to explain the contrasts. Some of his words clearly lead to the sub-theme of *rasm*, while others also lead to the *ḍabt* sub-theme and the *fawāsiḥ* sub-theme. This demonstrates his thorough understanding of the knowledge of *muṣḥaf* writing. In terms of the *rasm* subtheme, he says: “Eight words are written in Braille Quran with alif, but in the printed Quran they appear in wau and small alif.” (Ustaz Faizal/IV)

Ustaz Faizal has highlighted a huge number of variations between the two versions of the *muṣḥaf* for the sub-theme of *ḍabt* or symbols used with letters. The first distinction is that the Braille Quran and the *muṣḥaf al-Madīnah* use *ḍabt* differently. This includes cases where the same marking appears in both versions of the *muṣḥaf* but serves different purposes. His statement was as follows; “The first thing I want to highlight is the pronunciation of Jalalah in Braille. The lam with the sabdu/tashdid is followed by alif saghīr, while for the printed Quran the lam tashdid is lined with fathah.” He added: “One more thing, in surah al-Baqarah some words the Braille Quran uses alif hamzah but for the printed Quran it is small alif and hamzah. That is the difference between the verses of the Quran.” In the same sub-subtheme, he further added; “Subsequently, related to nūn sākinah in the Braille Quran that is applied in all

conditions, while the printed Quran features the sukūn marking on the nūn sākinah letters only for the rule of *izhār* only while the other nūn sākinah markings for the rules of *ikhfa'*, *iqḷāb* and *idgham* seeing their sukūn markings dropped. For *mīm sākinah* in the Braille Quran is applied in all conditions, while the printed Quran, *mīm sākinah* marking is only for *izhār syafawi*, that is, except for the letters *mīm* and *ba* which are dropped on the printed Quran. Next, the *syaddah* in the Braille Quran for the nūn sākinah and *mīm sākinah*. For nūn sākinah, *syaddah* is not used for nūn sākinah that is followed by the letter *nun*, just as *mīm sākinah* that is followed by the letter *mīm* does not use *syaddah* on the letters nūn and *mīm*, instead the printed Quran features nūn sākinah with its sukūn dropped and the second nūn is placed *tashdid*. Next for *tanween* in Braille Quran there is no specific code for non-parallel *tanween*, instead all *tanween* conditions use the same Braille code, while the printed Quran has parallel and non-parallel forms of *tanween*. Besides that, *iqḷāb* still retain the sukūn marking for nūn and *tanween* uses the same *tanween* as the other rules, instead the printed Quran assign tiny *mīm*, which means omission, for the rule of *iqḷāb* omitted nūn and also for *tanween* one of the *tanween* is replaced with tiny *mīm* for the *tanween* of *fatha*, *kasra* and *ḍamma*.” (Ustaz Faizal/IV)

The next sub-subtheme commented by Ustaz Faizal is regarding the feature of some *ḍabt* in the typical *muṣḥaf* but not in the Braille Quran. He reviews: “Furthermore, it is impossible to create a tiny nūn in the word (ننجي) in the Braille Quran while for the printed Quran there is tiny nūn in the word.” He affirms again in the same sub-subtheme, “Next the writing of *sin* above *sod* (and) below *sod*. There is no such writing in the Braille Quran but in the printed Quran it is there.” He further added: “Besides that, in terms of marking in the Braille Quran, there is no specific code for *hamzah waṣl*

or initial sod, there is no specific code for *ṣifr mustatīl* and *mustadīr*. As for the vowel lines, the Braille Quran feature no codes for the rules of *madd asli*, *wājib*, *lāzim*, and there is no elongated mark for recitations that exceed 2 *ḥarakāt*. The long mark only exists on the *muqatta'ah* letters at the beginning of the surah in 29 places in *al-Quran*. Apart from that, there is no specific code for *imālah*, *ishmām* and *tashīl* in the Braille Quran while the printed Quran bear the markings of *imālah*, *ishmām* and *tashīl*.” (Ustaz Faizal/IV)

Despite the research participants’ assertions and descriptions of variations in writing systems between the two versions of the *muṣḥaf*, the researcher believes there is confusion about the application of the term *Rasm ‘Uthmānī* by the participants, which they comprise the words *rasm* (letters) and *ḍabt* (sign). The statement of Ustaz Zamri demonstrates this: “Indeed, if in *Imlā’i*, it does not have the lines that... like the *madd* letters, the lines that are above all the bottom lines are also not written. It means the lines will be rewritten... Which means... as so, maybe for *Rasm Imlā’i* users, there will be a delay if they want to get synchronised with *Rasm ‘Uthmānī*.” (Ustaz Zamri/IV)

Ustaz Zamri has linked the status of *Rasm Imlā’i* to the absence of lines in the Braille Quran, such as lines that are not placed before *madd* letters. The discussion on the lines should not be a discussion pertaining to *rasm*. The presence or absence of a line or mark has no bearing and does not influence a *muṣḥaf*’s *rasm* status. In Ustaz Suhaimi’s comment, the identical scenario of understanding was discovered; “The Braille Quran is prone to *Imlā’i*, then there are some more signs that exist in *Rasm ‘Uthmānī*, but desist in the Braille Quran. The easiest example is that the tiny *mīm* does not exist, the tiny *mīm* then what is the sign... what is the sign of the buzz ‘enn’ the sign of *ikhfa’*, *iqḷāb* does not exist, the tiny *mīm* then the tiny *sod*, there are many more. It is

different with the Quran, it is obvious, obviously in terms of writing the Braille Quran and the Rasm ‘Uthmānī Quran is different.’ (Ustaz Suhaimi/IV)

Although the details on the issue of the use of these specific terms have no bearing on the study of the needs that was conducted, the researcher believes it should be taken seriously and is highly important for future research and improvement.

4.2.1.1.1.2 Physical Size

The theme of the second study findings in the category of differences is physical size. Physical size refers to the dimensions present on both *muṣḥaf* variants. In practice, the Braille Quran is substantially larger than the *muṣḥaf al-Madīnah*. This is related to the size of Braille codes, which have their own standard. Braille codes have a fixed size in Braille printing, thus they cannot be enlarged or minimised as simple as they can in typical writing. In addition, the method used to write the Braille codes has an impact on the size of the *muṣḥaf*. Unlike the *Rasm ‘Uthmānī*, each Braille code that symbolises the letters (*rasm*) is written one by one, unlike the text of the *muṣḥaf al-Madīnah*, which can be combined with one another. While in terms of marking (*dabṭ*), signs are not designated above or below letters as reflected in the *muṣḥaf al-Madīnah*, but rather the placement of the code for the signs is alternated with the position of the code for the letter (*rasm*). In his words, Ustaz Suhaimi mentioned the size discrepancy: “*If we use the current Braille Quran, there are many differences, there are many, plus when we look at al-Quran from a physical point of view, we already know, al-Quran for the sighted are only one book, the Braille Quran involves 6 volume 6 books. Okay then, it*

means it cannot be one book, it will be 6 volumes, that is one of the first.” (Ustaz Suhaimi/IV)

Apart from Ustaz Suhaimi, Ustaz Syahid also mentioned the physical size difference, but he focused on the implications of the size difference, such as the inconsistent number of pages, verse lines, and the number of verse lines on each page. He expands on this issue as the following; *“Braille pages are nothing alike with the pages of the typical Quran... err and in terms of verse lines... when the pages are not the same automatically the verse lines will follow after... err in terms of err people say err technical, the verse structure writing system which means err one page should be 15 lines in the typical Quran but the Braille Quran is different, it exceeds because it is thick as it is based on dots, so it is very different... aaa in terms of marking in terms of the number of the page are among the major concerns which is big because if the page numbering are not the same then there will be problems when conveying and so on...”* (Ustaz Syahid/IV)

4.2.1.1.1.3 Cost

The cost theme concludes the differences between the Braille Quran and the *al-Madīnah*'s category. In this theme, the costs meant by the research participants are capital and price. The cost of publishing the Braille Quran is a topic of discussion among the visually challenged. Because Braille codes are embossed, the paper used must be thicker and more durable. Of course, its increased size has a significant impact on the printing capital and sales price. A set of Braille Quran consisting of six volumes costs RM300 at the moment.

At the same time, the majority of visually impaired persons who utilise the Braille Quran are not well-to-do people. Sir Zamri, a Braille Quran teacher with an NGO activist background who is active in community service activities, particularly for the disabled, has brought attention to this difference by stating; “*And... Imlā’i is more economical in terms of cost, in terms of paper and all haa. Rasm ‘Uthmānī if soon we have it in Malaysia later. We are going to use more paper. Because there are many signs.*” (Encik Zamri/IV)

Ultimately, the participants in the study gave satisfying feedback in response to the subject of the differences between the Braille Quran and the *muṣḥaf al-Madīnah*. Almost every participant mentioned differences in writing systems as a major topic. The differences in terms of *muṣḥaf* size and cost are the other two angles that are discussed.

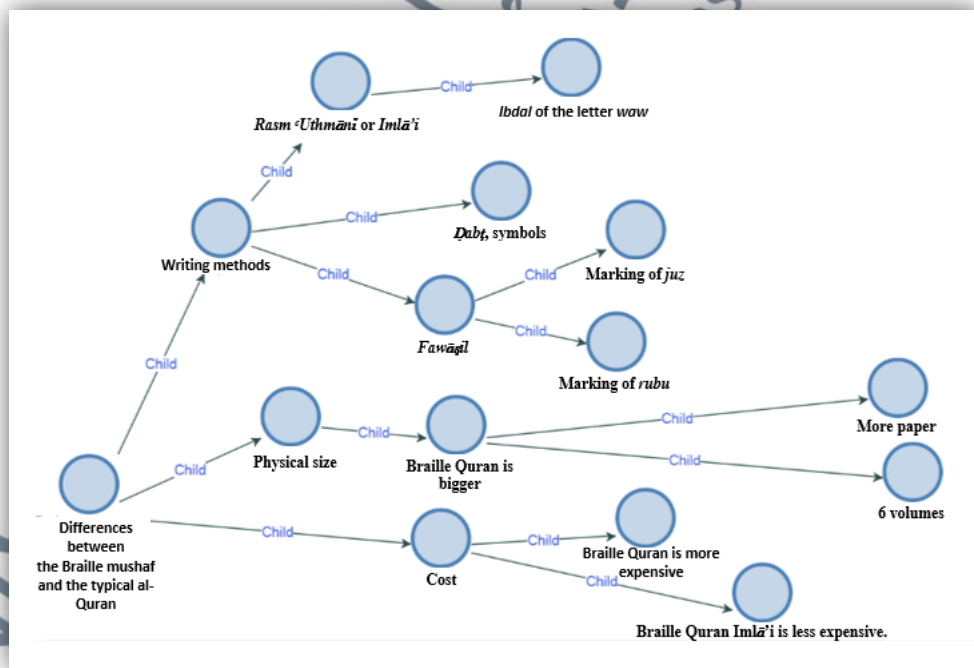


Figure 4.1: Diagram for the data of differences between the Braille Quran and the typical al-Quran.

4.2.1.1.2 Arising Issues Due to the Inconsistency between the Braille Quran and the *mushaf al-Madīnah*

This section discusses the study's findings associated with the perspectives of research participants, Sir Zakri, Mr. Zamri, Ustaz Bahri, Ustaz Ahmad, Ustaz Suhaimi, Ustaz Faizal, and Ustaz Syahid, on the issues encountered as a result of inconsistencies between the Braille Quran and the *mushaf al-Madīnah*. The researcher offered some suitable questions linked to the category in discussion to answer the research questions. The question was “Are there any problems or implications as a result of the lack of synchronisation between the Braille Quran and the *mushaf al-Madīnah*?” The researcher has asked the participants in this study to concentrate on the element of *mushaf* writing and disregard other concerns such as size and cost.

The answers to these questions were gathered through interviews since they linked to internal features of the users of the Braille Quran that touched on components of their experiences and perspectives. Themes, subthemes, and sub-subthemes of the problems that have arisen as a result of the contradiction between the Braille Quran and the *mushaf al-Madīnah* are summarised in the comparison matrix table below.

Table 4.4: Summary for the themes, subthemes and sub-subthemes for the category of arising issues due to the inconsistency between the Braille Quran and the *mushaf al-Madīnah*.

Category	Themes	Subthemes	Sub-Subthemes
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Arising issues due to the inconsistency between the Braille Quran and the <i>muṣḥaf al-Madīnah</i>	Confusion	In inclusive teaching and learning	Punctuation marks
	Understanding and Being Attentive to <i>Tajweed</i>	Unique approach	<i>Tadarus</i>
			Differences in page numberings
			Differences in <i>juz</i> division

Source: Interviews with research participants

The table above illustrates the perspectives of all research participants, which had identified two themes, three sub-themes, and four sub-sub-themes. The initial theme is confusion, with its sub-themes of in inclusive teaching and learning and communication when reciting with typical persons, while the sub-subthemes are punctuation marks, *tadarus*, differences in page numberings and differences in *juz* division. The second theme is *tajweed*'s comprehension and awareness, with its sub-theme of unique approach.

The confusion prompted by the inconsistency between the Braille Quran and the *muṣḥaf al-Madīnah* was shared by all seven research participants, while three of them emphasised the issue of comprehension and *tajweed*'s knowledge and awareness. The researcher discovered that all research participants were aware of the challenges that occur as a result of the inconsistency between the Braille and *muṣḥaf al-Madīnah*.

4.2.1.1.2.1 Confusion

Confusion is the first theme that responds to the study's inquiry. This theme refers to the confusion that happens when Braille Quran users engage with *muṣḥaf al-Madīnah* users, whether in teaching and learning sessions or joint recitation sessions. The present Braille Quran has progressed to the point where it can be recited by the visually handicapped; yet, when compared to the *muṣḥaf al-Madīnah*, it still has flaws that can be addressed to increase the reader's capacity to recite with *tajweed*.

4.2.1.1.2.1.1 In inclusive teaching and learning

The first subtheme, which is confusion in inclusive teaching and learning sessions, is caused by many punctuation variables, which are shown as sub-subthemes in the table above. Sir Zakri, the first research participant, stated: *"Those signs are not in the Braille Quran, right? Mīm alif, it does not reflect a mīm over alif, right? Mīm alif jamak. So now if there is a normal or sighted student coming in, we say, ok try looking at 'Ma' word. Ehh because we want to show this madd asli, ok? Madd asli. Try the word 'Ma'. They spelled. Mīm over alif. Ehh that is not correct. Yea. Do you understand? What I mean when I said wrong because of what? Because we do not have in the Braille Quran."* (Cikgu Zakri/IV)

Mr. Zamri also believes that the discrepancies in punctuation systems confuse Quran Braille Quran users with *muṣḥaf al-Madīnah* users. Take, for example, his claim: *"One more thing in teaching our children. Haa, this is the problem when we are teaching our children. Haa because we are Imlā'i, our children are 'Uthmānī haa in terms of waqf even the places are different. So we want to explain, so. Whether we want*

it or not it is like. If a blind person teaches a sighted person, he must know how Rasm ‘Uthmānī is like. Or else you are going to be in dispute hahaha. We say this, people say another.’ (Encik Zamri/IV)

Similarly, in his remark, Ustaz Bahri, a Braille Quran teacher, presented an example of the confusion that happened during his teaching and learning sessions with the visually impaired who utilised the Braille Quran; *“As currently he seems stuttered, he hesitates a little aaa even like I told ustaz yesterday regarding my pronunciation that have sifir mustatīl mark haa he does not have the mark haa so he hesitates the long short the long short haa then aaa on aaa madd asli, or madd tabii, the Braille has no lines, like in Rasm ‘Uthmānī has lines haa so aaa there is a bit confused, he has to be skilful, he has to be a little skilled there.”* (Ustaz Bahri/IV)

Ustaz Faizal, the sixth research participant, remarked; *“The only implication is that the process of inclusive Quranic teaching and learning is actually not effective for Braille users. Due to the differences between the Braille Quran and the printed Quran. The inclusive teaching process err may have less impact on Braille students. And due to the differences between the Braille Quran and the printed Quran, for example in the Braille Quran there is the letter alif but in the printed Quran for example using alif maqṣūrah or small alif but in the Braille Quran we use alif dot one... For example the word ‘attauraah’ in the existing Braille Quran uses ra alif ta marbūthah.. attaurah alif lam ta wau ra alif ta marbūthah. Aaa while in the printed Quran it is printed using alif lam ta wau ra alif maqṣūrah alif saghīr and also ta marbūthah... In terms of the form of writing it is different although it is the same sound of articulation but in terms of writing it is different.”* (Ustaz Faizal/IV)

In his remarks, he also detailed the issue of confusion that comes in the process of learning the Quran's recitation if done inclusively; *“Erm and also for other differences for example in the Braille Quran line markings are dropped on words that are bound for the rule of madd for example madd asli and also the category of madd far’ie. The line markings on these words are omitted, hidden, eliminated in the Braille Quran or even hidden in the existing Braille Quran in Malaysia but in the printed Quran does not occur so the meaning of the words that err is classified in the madd asli category and also the madd far’ie, the line before the madd letters is placed in the according lines... That becomes a difference, and the implications for Braille users when studying tajweed, when the teacher presents the method of tajweed in relation to the madd asli and also mad far’ie rules, there is a difference as well, so err the implication err is very large there. In regards to students’ mastery on the writing system err it is very in terms of writing err the implications and when learning the method of tajweed together with the sighted, there will be confusion among the Braille Quran users as it differs in terms of method from the Braille Quran. The present writing of al-Quran in Braille.”* (Ustaz Faizal/IV)

According to Ustaz Syahid, the confusion that happens during inclusive teaching and learning sessions between the visually impaired and the typical group is due to a misunderstanding of terminology. In his statement, he explains this, *“Now the issue is... When talking about writing... The impact that happens when we implement the learning and teaching system... When a teacher normally for example ‘Bismillah’... ba kasrah ‘Bi’ sin sukoon mīm kasrah ‘Mi’ but according to the Braille Quran the aspects of fathah kasrah ḍammah does not affect the visually impaired. So, the explanation of the vowel lines because it has become one if I call it one letter even though the term may not be included in the dictionary of hijaiyyah letters fathah, kasrah, ḍammah but to*

serve as a distinction it has become a vowel letter because the spelling concept is like Roman. For example the word buku (book). B-U-K-U is the same as jawi ba kasrah followed by sin sukoon sign followed by mīm kasrah... That is one of the difference issues that occur. So, when we ask to spell it or anything, clashes are likely to occur but experienced people understand it... There it is from the angle of difference in writing, it is very obvious.” (Ustaz Syahid/IV)

4.2.1.1.2.1.2 Communication When Reciting with Typical Persons

The second sub-theme of the confusion theme is in the scope of the confusion that occurs when interacting with typical groups in Quran recitation activities. The visually impaired are not exempted from participating in everyday activities in a society where the majority are typical groups. Religious activities involving interaction with al-Quran are among the activities carried out with the typical group. For example, during Ramadan, there are *tadarus* activities as well as programmes that entail congregational *tilāwah* of the Quran. Because the printed text and Braille codes are different sizes, there is a discrepancy in the number of words per line, the number of lines on each page, and the number of pages each *surah*. When trying to coordinate the allocation of recitation between users of the Braille Quran and the *al-Madīnah*, oftentimes the discrepancy resulting great confusion. The issue of discrepancies is also magnified in the division of some *juz* between the Braille Quran and the *al-Madīnah*.

In this regard, Ustaz Ahmad, a well-versed user of the Braille Quran, has shared his thoughts and ideas in his statement; “*We do anything that is viable to be coordinated since it is easy, for example page numberings. Many typical al-Quran can say 90 aaa more than 90% in Malaysia, the page numberings are the same. Let's say, for example*

juz 2, juz 2, for example, is on page aaa 30, any al-Quran also 30 because most of them is in 30, so the Braille Quran followed after, haa so it is easy for us to communicate or tadarus together haa tadarus together, reciting 'Yaayyuhallazina amanu kutiba 'alaikumussiyam' page 38, we look in our own page, we do not know our paging is incorrect, at first we were slow in looking it up, so when reading a book, so if the book, the book on the left is for the sighted on the right we look, we look ooo page 38 is here."

(Ustaz Ahmad/IV)

He went on to tell about the incident that transpired during the *tadarus* activity; "Then mark the page, aaa mark the page, he did not look at the Braille Quran, he said, 'Tadarus you read one page all right' haa the whole page, so he took one page then he stopped, we do not know how did he end up with one page, so we mark it after finish one page then we make a mark. Haa we make a mark... Haa that is necessary." (Ustaz Ahmad/IV)

Ustaz Faizal, the sixth research participant, touched on the subtheme of communication when reading with the typical group. He focuses on the sub-subthemes that demonstrate the existence of issues caused by variations in the division of *juz* between the Braille Quran and the *al-Madinah*. His assertion; "And apart from that, in joining *tadarus* Braille Quran users will face problems because there are differences in terms of division of *juz* in the Braille Quran with the printed Quran. There is difference. This is a big implication because the division of *juz* has differ in the existing Braille Quran." (Ustaz Faizal/IV)

Although the concern raised on the subtheme of communication when reading with the typical group is unrelated to the earlier stated *muṣḥaf* text writing method,

efforts to remedy this confusion should be taken into account and rectified as best as feasible.

4.2.1.1.2.1.3 Understanding and Being Attentive to Tajweed

The second theme of the study's findings is to understand and be attentive to *tajweed*. When reciting al-Quran or *tilāwah*, a reader must follow the principles established in the *tajweed* discipline. The recitation of al-Quran in *jahar* (or, to be more precise, *tilāwah*) is not the same as the recitation of the standard Arabic text. This is because the al-Quran's text must be pronounced according to the standard as narrated by the *imams* of *Qiraat* taken from Rasulullah SAW. There is a mechanism in the *muṣḥaf al-Madīnah* that facilitates readers to recognise the rules of *tajweed* that is designated in specific places. For instance, there are two types of *tanween*, one is employed in the state of *izhār* recitation, while the other is employed in situations other than *izhār*. The same goes for the *sukoon* sign that is placed on the letter *nūn sākinah*. Only the *nūn sākinah* recited with *izhār* is indicated with *sukoon* in the *muṣḥaf al-Madīnah* text, whereas those pronounced with *idgham* or *ikhfa'* are not. The placement of the *madd* signs that exceeds two *ḥarakāt*, such as *madd wājib muttasil* and *madd jāiz munfaṣil*, is another example.

The sign for *madd* that exceeds two *ḥarakāt* is not placed in the Braille Quran as it is in the *muṣḥaf al-Madīnah*. The same is held for the letters *nūn sākinah*, which are all indicated with *sukoon* regardless of whether the recitation is *izhār*, *idgham*, or *ikhfa'*. As a result, users of the Braille Quran face a larger difficulty than readers of the

muṣḥaf al-Madinah in terms of the need to strengthen themselves in order to better grasp and be attentive to the rule of *tajweed*, as well as be adept in applying it.

One subtheme has been determined for this theme's review, which is the unique approach. Mr. Zamri, the second interview research participant, stated this sub-theme clearly. According to him, "*And another advantage of Imlā'i, you have to be proficient in the rule of tajweed. A blind person who wants to be proficient in reciting al-Quran, they have to understand the rule of tajweed. If they do not understand the rule of tajweed then they cannot read well.*" (Encik Zamri/IV)

He emphasised the statement further by saying; "...it is just that Imlā'i person has the advantage in mastering the rule of tajweed. So aa if the ʿUthmānī people I see they are not... Like my wife. She do not know tajweed when being asked. But when she recites everything correctly. Aa. But when we ask tajweed, she cannot answer. Haa that is the weakness. But for an Imlā'i person, either they want it or not they have to know the pronunciation then only they can sound. If not, how does they want to pronounce, is is a sign, right? Unless he knows the meeting of the letters, then only they can pronounce, automatically can pronounce haa. That is the special thing." (Encik Zamri/IV)

Ustaz Suhaimi also agreed with the needs of Braille Quran users who should be more attentive. He stated, "*There are a few things that may be that I mentioned earlier on tajweed enn the rule of humming does not have a sign, the Braille Quran does not indicate a sign of humming at all, but aaa can, can which means to sit together with the Braille Quran and talaqqi can, I do not think there is a problem. The important thing is that those who use the Braille must be attentive to Braille itself haa.*" (Ustaz Suhaimi/IV)

In a nutshell, some of the implications of the inconsistency between the two *muṣḥafs* are from the perspective of communication between users of al-Quran Braille and users of *muṣḥaf al-Madīnah* from the perspective of confusion in communication, especially in teaching and learning activities, according to the research participants. Besides that, when performing the activity of reciting al-Quran together, as in the *tadarus* al-Quran ceremony, there is a misunderstanding in communicating between users of both versions of the *muṣḥaf*.

Another implication is that users of the Braille Quran must have a higher level of *tajweed* knowledge than users of the *muṣḥaf al-Madīnah*.

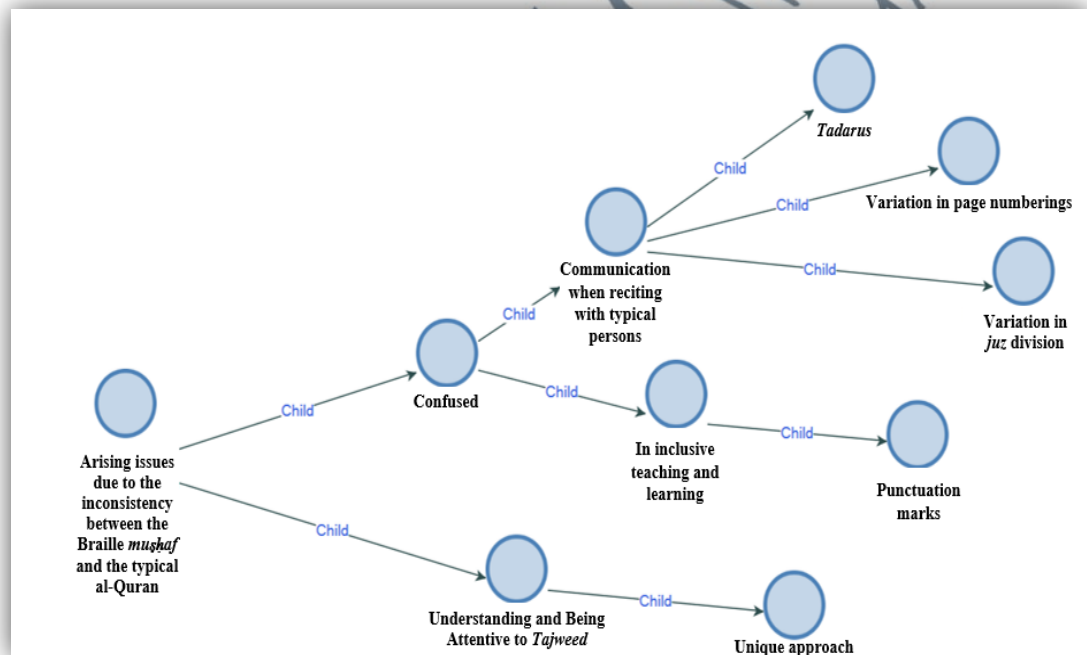


Figure 4.2: Diagram for the data of the arising issues due to the inconsistency between the Braille Quran and the typical al-Quran

4.2.1.1.3 The Need to Coordinate the Braille Quran's Writing with the *muṣḥaf al-Madīnah*

This section identifies the study's findings regarding the viewpoints of research participants, Sir Zakri, Mr. Zamri, Ustaz Bahri, Ustaz Ahmad, Ustaz Suhaimi, Ustaz Faizal, and Ustaz Syahid, regarding the need to coordinate the writing employed in Braille Quran with *muṣḥaf al-Madīnah*. The researcher offered some relevant questions linked to the category in research to answer the study's questions. The question's foundation is "Is there a need to coordinate the writing employed in Braille Quran (which adopts *Rasm Imlā'i* with *ḍabt* as per Quran Majeed's standard) with the *muṣḥaf al-Madīnah* (which adopts *Rasm 'Uthmānī* with *ḍabt* as per Mujamma' Malik Fahd's standard)?" This study aims to obtain direct feedback from participants on the level of need. The researcher needs this information since it is a straightforward response from the study participants regarding their willingness to indicate whether or not there is a need as stated. The researcher also induced the research participants to concentrate solely on coordination from the standpoint of writing, neglecting other factors such as size and cost.

Data from this question is feasible for collection using the interview approach because it is relevant to a decision that should be made by users of the Braille Quran based on considerations including aspects of their experience and perspectives. The themes and subthemes for the need to coordinate the Braille Quran writing system with the *muṣḥaf al-Madīnah* are listed in the table below to aid comprehension.

Table 4.5: Summary of the themes and subthemes for the need to coordinate the Braille Quran writing system with the *muṣḥaf al-Madīnah*

Category	Themes	Subthemes
The need to Coordinate the Braille Quran Writing System with the <i>Muṣḥaf al-Madīnah</i>	Need coordination	Needed
		Good
		Welcomed
		Crucial
		Depends on suitability

Source: Interviews with research participants

The table above depicts the findings of the study on the need for coordination of the Braille Quran writing system with *muṣḥaf al-Madīnah* which begins with the theme i) need coordination, and ii) depends on suitability.

4.2.1.1.3.1 Need for Coordination between *Mushaf*

In this investigation, there are just two main themes. The first theme is introduced by the findings of the study on the need for coordination. The coordination in this study refers to the writing system for the Quranic text between the Braille Quran and the *muṣḥaf al-Madīnah*. The *rasm* and *ḍabt* elements are the two fundamental elements in the system of writing the Quran text. Aside from these two elements, there are additional elements, such as coordination in terms of *juz* division and coordination in terms of information displayed at the start of each surah. The need for coordination between the two versions of the al-Quran *muṣḥaf* was explicitly highlighted by Ustaz Zamri. His assertion, “I think it is necessary now, in the mainstream. If we can, we want a uniform

Quran actually.” (Ustaz Zamri/IV)

Ustaz Zamri elaborated on his viewpoint, *“I think for the blind... They need to know the Rasm ‘Uthmānī Quran as well.”* (Ustaz Zamri/IV) His remark leads to the interpretation that he believes the visually impaired who use the Braille Quran are discriminated against since they do not have access to the official writing method of the Quranic text as attained by the typical group.

For Ustaz Bahri, the coordination of the text writing system of the Braille Quran with the *muṣḥaf al-Madīnah* is beneficial since it is a requirement in writing the text of al-Quran. Furthermore, it will resolve the issue of misunderstanding caused by differences, particularly in the area of marking. According to his statement, *“I think it is good to be coordinated because even we normal people are instructed to read in the Rasm ‘Uthmānī aaa so that is why there are several markings that are a bit confusing, the Braille Quran, first is it is hard to remember their codes and whatnot, then the marking, I quite see they were confused with the marking, hahaa they got confused because they are not the same.”* (Ustaz Bahri/IV)

Ustaz Bahri went on to explain the advantages of coordination between the two *muṣḥaf* s. He believes that the coordination will make reading the Braille Quran easier. His remark, *“Because if we can adopt the rasm in this Braille in the Rasm ‘Uthmānī, means it will be easier, easier aaa easier for them to read the Braille Quran.”* (Ustaz Bahri/IV).

Ustaz Ahmad agreed with the aforementioned viewpoints asserted by the two research participants. Although he appeared hesitant at first and only offered coordination to areas that could be coordinated, he remarked, *“Anything that can be coordinated, we do it as it is easy.”* However, he determined at the end of the conversation that this coordination was indeed needed, in his speech, *“It needs to be*

coordinated, it is possible, it is not a problem like people in other states, they can use it like the states with Rasm ‘Uthmānī, they can use it, we can also use it, we might be not used to it, feels awkward and everything, but if we are used to it, it is fine, it only feels awkward in the beginning. Haa like that.” (Ustaz Ahmad/IV)

Ustaz Faizal and Ustaz Syahid, two other research participants, shared the same subtheme in expressing their excitement for the two versions of the al-Quran *mushaf* to be coordinated. With his statement, Ustaz Faizal, *“In my personal opinion regarding the coordination of the Braille Quran with the printed Quran is very welcomed by me as a user of the Braille Quran which have also used the printed Quran before... So in my opinion, I am very eager for the coordination of the Braille Quran with the printed Quran to be successfully realised.”* (Ustaz Faizal/IV) Ustaz Syahid presented a similar tone in his statement as well, *“In my opinion, personally I very welcome if there is this coordination system in place and it is very necessary for the Braille Quran and the typical Quran to be coordinated.”* (Ustaz Syahid/IV)

Ustaz Faizal has raised concern for the visually impaired who utilise the Braille Quran in terms of their grasp of the actual writing system of the Quranic text. He claimed that the current way of writing the Braille Quran text is deficient. His statement, *“In my opinion, I cannot wait for the coordination of the Braille Quran with the printed Quran to be successfully realised... Because this coordination is very necessary to correct the perception of Braille users on the actual way of writing the Quran in the mushaf... So that the users of the Braille Quran are not deceived by the way of writing which is less than perfect... Less perfect in terms of its rasm and also the marking of a mushaf...”* (Ustaz Faizal/IV).

After expressing his delight if the text writing system of the Braille Quran could be coordinated with the *al-Madīnah muṣḥaf*, Ustaz Syahid concluded his conversation with the following statement; *“This is important and vital to me.”* (Ustaz Syahid/IV)

4.2.1.1.3.2 Depends on the Suitability

The investigation’s second theme is to look at suitability. There are lots of challenges in transcribing a written form to a Braille version. The constraint of Braille codes, which can only construct sixty-three codes, is one of the most significant obstacles. Furthermore, the technical features of Braille writing users, such as their requirement to identify a large number of codes and then memorise those codes, are not to be overlooked. These aspects have an impact on the suitability of the Braille Quran text’s coordination with the *al-Madīnah* text, as well as its use. The changes that will occur as a result of this coordination will have an impact on how users who have been using the existing writing system for a long time interact. In this issue, Ustaz Suhaimi made a statement in which he conveyed his thoughts, *“Whether it is necessary or not, it has to depend on the suitability or can the Quran in Braille help to explain meaning in the rule of recitation? It depends on the need. If I were to say it is hard to answer this question hahaha because it involves a lot of aspects as well, there are many constraints in terms of Braille dots themselves that only have 6 dots, sometimes the combination of dots, sometimes if we modify it for a sign, build a new addition term, the implications might be big too. The implication is that big, first the senior users with the new users, I give for example, the senior users with the new users, the senior users use the old Quran, when they use the old Quran and change to the new Quran, it may be a bit awkward for them haa for example the effort that we are going to do such as the alif madd with*

fathah, waw with dhommah, right, but in fact there is no different, only addition of signs. But the senior users will feel awkward, they will feel awkward, haa so it can be coordinated but maybe we have to look back from the implications on the old generation with the new generation... Haa in terms of its implications.” (Ust Suhaimi/IV)

The study’s findings show that nearly all research participants, who are avid users of the Braille Quran, agree that the Braille Quran’s existing text writing system to be coordinated with the *al-Madīnah muṣḥaf* writing system. Two of the seven participants in the study did not offer an opinion on whether they agreed or disagreed. This, according to the researcher, is due to the two study participants’ lack of clarity on the details required in the coordination process between the two versions of the Quran, or perhaps also doubts about users’ ability or willingness to accept something new after so long using the *muṣḥaf* in its current state.

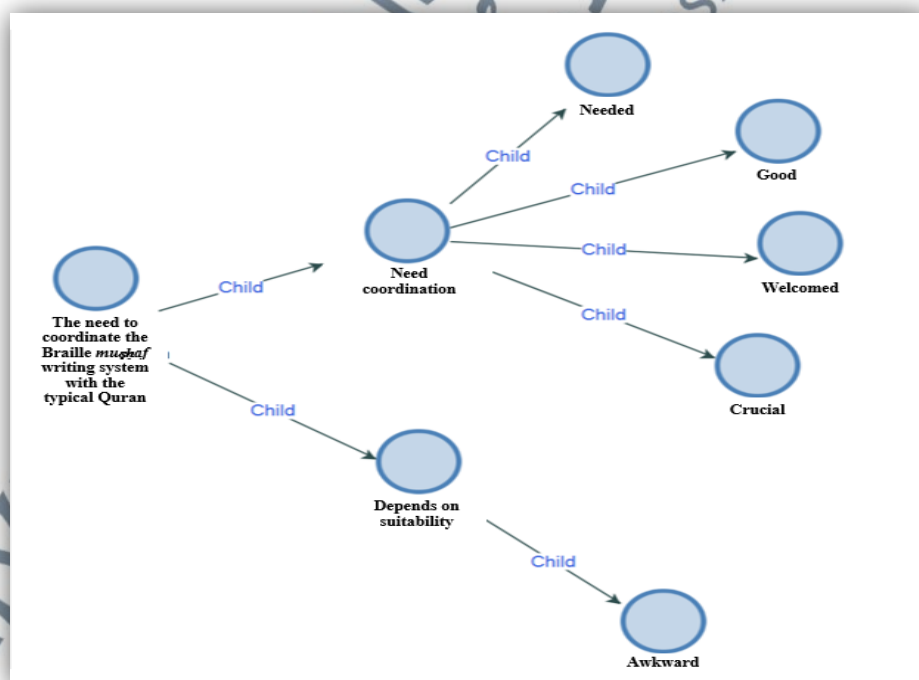


Figure 4.3: Diagram of the data of the need to coordinate the Braille Quran’s *muṣḥaf* writing with the *muṣḥaf al-Madīnah*

4.2.1.2 Conclusions for the Needs Analysis

All of the research questions around the need to coordinate the Braille Quran text writing system with the *mushaf al-Madīnah* text were answered by the findings of the needs analysis. In this analysis, all data were collected qualitatively by utilising interview methods.

Table 4.6: Summary of the themes on the need for the coordination between the Braille Quran with the *al-Madīnah* based on the viewpoints of the visually impaired as the users.

Themes	The need to coordinate the Braille Quran writing system with the <i>mushaf al-Madīnah</i> writing system						
Research Participants	Writing methods	Physical size	Cost	Confusion	Understanding and being attentive to <i>tajweed</i>	Need coordination	Depends on suitability
Sir Zakri	*			*			
Mr. Zamri	*		*	*	*	*	
Ustaz Bahri	*			*		*	
Ustaz Ahmad	*			*		*	
Ustaz Suhaimi	*	*			*		*
Ustaz Faizal	*			*		*	
Ustaz Syahid	*	*		*		*	

Based on the presented data from the analysis of needs, it is clear that there are several dimensions of difference between the Braille Quran and the *al-Madīnah*, whether from

the perspective of the writing system, which is the study's main focus, or from a physical aspect, among other things. The implications of such disparities were also explicitly acknowledged by the research participants, resulting in the conclusion that the coordination was required. This will have a significant and favourable impact on Braille Quran users, particularly in terms of the teaching and learning process, mastery of individual recitation, and mastery of *muṣḥaf* writing knowledge. Hence, the party in charge of developing the Braille Quran for use by the visually impaired requires a unique framework and set of guidelines for this coordination. These guidelines should be created in accordance with the current understanding of writing the most recent Quranic text, while also honouring the distinctiveness of the Braille writing system and acknowledging the capacity of visually impaired users who rely on their sense of touch.

The researcher will describe these findings at the end of the study in terms of the study's conclusions, implications, and recommendations for future research.

4.2.2 *Rasm and Dabṭ* Applications in the Braille Quran

According to the Dewan Bahasa dan Pustaka and the Kamus Pelajar Edisi Kedua, *muṣḥaf* refers to a handwritten copy of al-Quran. It is a Malay term that is derived from Arabic and has the Arabic pronunciation of '*muṣḥaf*'. The word *muṣḥaf*, from the perspective of linguistics, denotes something produced in the form of '*suhuf*', according to *al-Muḥiṭ* and Mukhtar al-dictionaries. The term '*suhuf*' in Arabic is a plural word for the word '*sahifah*', which means scripture, according to Allah SWT in *surah al-A'la* verses 18 and 19:

إِنَّ هَذَا لَفِي الصُّحُفِ الْأُولَى ﴿١٨﴾ صُحُفِ إِبْرَاهِيمَ وَمُوسَى ﴿١٩﴾

Indeed, this is in the former scriptures, The scriptures of Abraham and Moses. (Al-Qur'an. Al-A'la 87:18-19)

In *surah al-Bayyinah*, the term *suhuf* was mentioned in verses 2 and 3:

رَسُولٌ مِّنَ اللَّهِ يَتْلُو صُحُفًا مُّطَهَّرَةً ﴿٢﴾ فِيهَا كُتُبٌ قَيِّمَةٌ ﴿٣﴾

A Messenger from Allah, reciting purified scriptures. Within which are correct writings. (Al-Qur'an. Al-Bayyinah 98:2-3)

The word *muṣḥaf* is defined in terms of Quran knowledge as something that is made to amass the *suhuf* (scriptures) written on it al-Quran al-Karim (al-Asfahani, 2009). According to Al-Marhum Syeikh al-Zarqani (1994), *suhuf* is “The scriptures collected in it al-Quran with its arrangement of verses and *surahs* that comply to the form of collection agreed upon by the Muslims during the time of Saidina Uthmān RA.”

Based on the definitions established by scholars on the word *muṣḥaf*, we may conclude that *muṣḥaf* is a material collected as al-Quran in line with its situation in terms of the arrangement of *surah* and verse, as initiated by Saidina Uthmān RA. This conclusion summarises the definition of *muṣḥaf*, whether it is handwritten or printed papers, in the form of a compact disc or another electronic data collection equipment, or even paper that is totally written al-Quran content in Braille.

4.2.2.1 Rasm application in the Braille Quran

The analysis of the text of the Braille Quran printed by PERTIS on the aspect of *rasm* yielded this conclusion. Because the nature of Braille's writing does not carry the connectivity factor between the letters, all letters are written one by one and alternated

with the marking/*ḥarakāt*, the researcher’s assessment and comparison are based solely on the use of letters without regard to the way the letters are connected to form a word. According to the method used to transcribe the situation in which the letters are connected or separated in the writing of Braille Arabic, the Braille characters are written without spacing if they are connected letters. In Braille’s writing, the fact that some Arabic letters have their unique form when it is separated or joined, or in other words, when the letter is at the beginning, middle, or end of a word, is inapplicable. The table below shows an example of some of the letters:

Table 4.7: Differences in the forms of *Hijaiyyah* letters according to their situations and their comparison with Braille letters

	<i>Hijaiyyah</i> letters at the beginning of a word	<i>Hijaiyyah</i> letters in the middle of a word	<i>Hijaiyyah</i> letters at the end of a word
Arabic writing	ج ص ع هـ	ج ص ع هـ	ج ص ع هـ
Braille writing	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠	⠠⠠⠠⠠⠠

This analysis is based on the features of *Rasm ‘Uthmānī* as described by *ulama* of Quran, particularly in the discipline of Quran writing knowledge. According to al-Hamad (2016) in his work, *al-Muyassar fi ‘Ilmi Rasm al- Muṣḥaf wa Dhabtiḥ*, which was also guided by major sources preceding his work such as *al-Muqni’ fi Ma’rifati Marsum Masahif Ahl al-Amsar* by Abu ‘Amr Uthmān al-Dani (2016), *Mukhtasar al-Tabyin li Hijai al-Tanzil* by Abu Daud Sulaiman bin Najah (2002), *‘Aqilatu al-Atrab al-Qasaid fi Asna al-Maqasid fi ‘Ilmi Rasm al- Muṣḥaf* by al-Qasim al-Syatibi (2006)

and other works, the features of *Rasm ʿUthmānī* that was discussed are *al-ḥadhf* (ellipsis), *al-ziyādah* (addition), *al-badl* (substitution) and the writing of *Hamzah* and *al-waṣl wa al-faṣl* (connection and separation). The sixth feature, which is *Ma Fihi Qiraatan Tuktabu ʿala Ihdahima* (the words that contain two *Qiraat* but are only written in either one) is not included in this study because the feature had no prospect of being applied in Braille writing. Furthermore, this last feature is an optional feature that has not been agreed upon by experts in the subject of al-Quran *mushaf* writing knowledge.

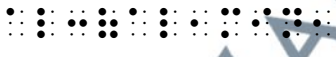



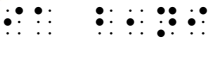


4.2.2.1.1 Al-Ḥadhf

In the context of Quranic writing, *al-ḥadhf* refers to the act of omitting, eliminating or aborting a letter from a word. These omitted letters are not written in the Quran's *rasm*, although they are required to be recited either when continuing recitation (*waṣl*) or while stopping recitation (*waqf*). Five letters are categorised in this situation, which are the letters *alif*, *ya*, *waw*, *lam* and *nūn* (al-Hamd, 2016).

According to research and observation by the researcher, this feature is not fully implemented in the *mushaf* of the Quran Braille. There are five conditions for those involving the letter *alif*. (al-Hamad, 2016), which are:

- i. *Alif* that is omitted in the *jama' mudhakkār salīm* words.
- ii. *Alif* that is omitted in the *jama' muannath salīm* words.
- iii. *Alif* that is omitted in the words that contain *ḍamir nahnu* (*nūn* and *alif*) connected with *ḍamir* that follows after.
- iv. *Alif* that is omitted in the non-Arabic words exceeding three letters.
- v. *Alif* that is omitted in the words that do not belong to any method.


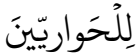



Table 4.8: *Ḥadhf* of *alif* and its applications in the Braille Quran.

Types of <i>ḥadhf</i>	<i>Rasm</i> in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
<i>Alif</i> that is omitted in the <i>jama' mudhakkar salim</i> words.	الْعَالَمِينَ	 الْعَالَمِينَ	<i>Rasm Imlā'ī</i>
<i>Alif</i> that is omitted in the <i>jama' muannath salim</i> words.	وَالصَّافَاتِ	 وَالصَّافَاتِ	<i>Rasm Imlā'ī</i>
<i>Alif</i> that is omitted in the words that contain <i>dhamir nahnu</i> (<i>nūn</i> and <i>alif</i>) connected with <i>dhamir</i> that follows after.	وَزِدْنَاهُمْ	 وَزِدْنَاهُمْ	<i>Rasm Imlā'ī</i>
<i>Alif</i> that is omitted in the non-Arabic words exceeding three letters.	إِسْرَائِيلَ	 إِسْرَائِيلَ	<i>Rasm Imlā'ī</i>
	يَا بَنِي	 يَا بَنِي	<i>Rasm Imlā'ī</i>
<i>Alif</i> that is omitted in the words that do not belong to any method.	لَاكِنِ	 لَكِنِ	<i>Rasm 'Uthmānī</i>
	ذَلِكَ	 ذَلِكَ	<i>Rasm 'Uthmānī</i>

Meanwhile, the letter *ya* is bound to these seven situations, which are:

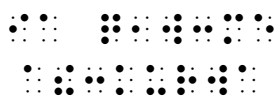
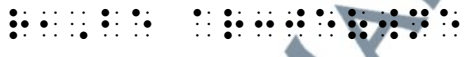


- vi. *Ya* that is omitted in the middle of the word that contains two *ya*.
- vii. *Ya* that is omitted at the end of the word that contains two *ya*.
- viii. *Ya* that is omitted at the end of the word considering it is not pronounced as it is followed by a *sākinah* letter, or because it is ended (*waqf*) without *ya*.
- ix. *Ya* that is omitted in the word Ibrahim in the *surah al-Baqarah* for Iraq and Syam *muṣḥaf* (but is written in the *al-Madīnah* and *al-Mekah muṣḥaf*).
- x. *Ya* that is omitted at the end of the sentence due to the similarity of sound.
- xi. *Ya dhamir mutakallim* that is omitted in the condition when it is based on a calling word.
- xii. *Ya* that is omitted without any apparent reason.

Table 4.9: *Ḥadhf* of *ya* and its applications in the Braille Quran.

Types of <i>ḥadhf</i>	<i>Rasm</i> in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
<i>Ya</i> that is omitted in the middle of the word that contains two <i>ya</i>	لِلْحَوَارِيِّينَ (As-Ṣaf: 14)		<i>Rasm</i> <i>Imlā'i</i>
	لِلْحَوَارِيِّينَ		
<i>Ya</i> that is omitted at the end of the word that contains two <i>ya</i>	الَّتِي (An-Nisā': 69)		<i>Rasm</i> <i>Imlā'i</i>
	الَّتِي		
<i>Ya</i> that is omitted at the end of the word	يَسْتَحْيَ		<i>Rasm</i> <i>Imlā'i</i>

end of the word that contains two <i>ya</i>	(Al-Baqarah: 26)	يَسْتَحْيِي	Rasm Imlā'i
	(Al-Furqan: 49)	لِيُحْيِي	
Ya that is omitted at the end of the word considering it is not pronounced as it is followed by a <i>sākinah</i> letter, or because it is ended (<i>waqf</i>) without <i>ya</i> .	(An- Nisa': 146)	يُؤْتِ اللَّهُ	Rasm ^c Uthmānī
	(Taha: 12)	بِالْوَادِ الْمُقَدَّسِ	Rasm ^c Uthmānī
	(Qaf: 41)	يُنَادِ الْمُنَادِ	Rasm ^c Uthmānī
Ya that is omitted in the word Ibrahim in the <i>surah al-Baqarah</i> for Iraq and Syam <i>muṣḥaf</i> (but is written in the <i>al-Madīnah</i> and <i>al-Mekah muṣḥaf</i>).	(Al-Baqarah: 258)	إِبْرَاهِيمَ	Rasm Imlā'i
		أَبْرَاهِيمَ	
Ya that is omitted at the end of the sentence due to the similarity of sound.	(Al-Baqarah: 40)	فَأَرْهَبُونَ	Rasm ^c Uthmānī
	(Ar-Ra'd: 9)	الْمُتَعَالِ	Rasm ^c Uthmānī








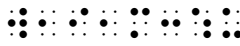
المُّتَعَالِ

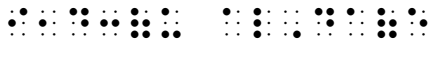
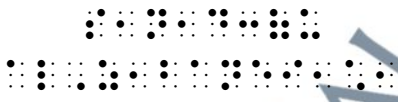
<p><i>Ya</i> dhamir <i>mutakallim</i> that is omitted in the condition when it is based on a calling word.</p>	<p>يَقَوْمٌ اذْكُرُوا (Al-Mā'idah: 20)</p>		<p><i>Rasm</i> <i>Imlā'ī</i></p>
		<p>يا قَوْمِ اذْكُرُوا</p>	
	<p>رَبِّ اَرْجِعُونِ (Al-Mukminun: 99)</p>		<p><i>Rasm</i> <i>Uthmānī</i></p>
		<p>رَبِّ اَرْجِعُونِ</p>	
<p><i>Ya</i> that is omitted without any apparent reason.</p>	<p>اِذَا دَعَانِ (Al-Baqarah: 186)</p>		<p><i>Rasm</i> <i>Uthmānī</i></p>
		<p>اِذَا دَعَانِ</p>	
	<p>يَوْمَ يَأْتِ (Hud: 105)</p>		<p><i>Rasm</i> <i>Uthmānī</i></p>
		<p>يَوْمَ يَأْتِ</p>	

For the letter *waw*, four situations are involved, which are:

- xiii. *Waw* that is omitted one from the two *waw* in a word, in which the first is *waw* with *sukoon* and the second is with *dhammah*.
- xiv. *Waw* that is omitted in the case where it is the host for the letter *hamzah* and a *waw* follows after.
- xv. *Waw* that is omitted in the case where it is the host for the letter *hamzah* and it is situated between two *waw*.
- xvi. *Waw* that is omitted at the end of the *Fi'il* word in four locations in the *muṣḥaf*.

Table 4.10: *Hadhf* of *waw* and its applications in the Braille Quran.





Types of <i>hadhf</i>	<i>Rasm</i> in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
Waw that is omitted one from the two <i>waw</i> in a word, in which the first is <i>waw</i> with <i>sukoon</i> and the second is with <i>dhammah</i> .	يَسْتَوُونَ (At-Taubah: 19)		<i>Rasm</i> <i>Imlā'i</i>
		يَسْتَوُونَ	
Waw that is omitted in the case where it is the host for the letter <i>hamzah</i> and a <i>waw</i> follows after.	دَاوُدُ (Al-Baqarah: 251)		<i>Rasm</i> <i>Imlā'i</i>
		داوودُ	
Waw that is omitted in the case where it is the host for the letter <i>hamzah</i> and a <i>waw</i> follows after.	مَسْئُولًا (Al-Isra': 34)		<i>Rasm</i> <i>Imlā'i</i>
		مَسْئُولًا	
Waw that is omitted in the case where it is the host for the letter <i>hamzah</i> and a <i>waw</i> follows after.	وَيَذَرُونَ (Ar-Ra'd: 22)		<i>Rasm</i> <i>Imlā'i</i>
		ويذروونَ	
Waw that is omitted in the case where it is the host for the letter <i>hamzah</i> and it is situated between two <i>waw</i> .	لَيْسُوا (Al-Isra': 7)		<i>Rasm</i> <i>Imlā'i</i>
		ليسوا	
Waw that is omitted in the case where it is the host for the letter <i>hamzah</i> and it is situated between two <i>waw</i> .	الْمَوَّودَةُ (At-Takwir: 8)		<i>Rasm</i> <i>Uthmānī</i>
		الموودة	
Waw that is omitted at the end of the <i>Fi'il</i> word in four locations in the <i>muṣḥaf</i> .	وَيَدْعُ الْإِنْسَانَ (Al-Isra': 11)		<i>Rasm</i> <i>Uthmānī</i>
		ويدعُ الإنسانُ	
Waw that is omitted at the end of the <i>Fi'il</i> word in four locations in the <i>muṣḥaf</i> .	وَيَمِّحُ اللَّهُ (As-Syura: 24)		<i>Rasm</i> <i>Uthmānī</i>
		ويمحُ اللهُ	

وَيَمَّحُ اللَّهُ		
يَدَّعُ الدَّاعُ (Al-Qamar: 6)		Rasm Uthmānī
يَدَّعُ الدَّاعُ		
سَنَدَّعُ الزَّبَانِيَّةَ (Al-A'laq: 18)		Rasm Uthmānī
سَنَدَّعُ الزَّبَانِيَّةَ		

Meanwhile, the letter *lam* is only bound for two types of situation, which are:

- xvii. *Lam* on the *isim* of *mawsul*.
- xviii. *Lam* in the word of *al-Lail*.

Table 4.11: *Ḥadhf* of *lam* and its applications in the Braille Quran.

Types of <i>ḥadhf</i>	Rasm in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	Rasm status
<i>Lam</i> on the <i>isim</i> of <i>mawsul</i>	الَّذِي		Rasm Uthmānī
	وَالَّذِي		Rasm Imlā'ī
<i>Lam</i> in the word of <i>al-Lail</i>	اللَّيْلِ		Rasm Imlā'ī
	اللَّيْلِ		

The letter *nūn* also involved in two situations as follows:

xix. *Nūn* in the word نُنَجِّي (al-Anbiya: 88).

xx. *Nūn* in the word تَأْمَنَّا (Yusuf: 11).

Table 4.12: *Ḥadhf* of *nūn* and its applications in the Braille Quran.

<i>Rasm</i> in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
نُنَجِّي		<i>Rasm Imlā'i</i>
تَأْمَنَّا		<i>Rasm 'Uthmānī</i>




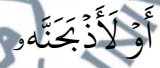
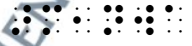



4.2.2.1.2 Al-Ziyādah

In the context of Quranic writing, *al-Ziyādah* refers to a letter written in *rasm* that is not pronounced in either the state of *wasl* or *waqf*. The letters *alif*, *ya* and *waw* appear in al-Quran's *rasm* but are not pronounced. These letters can be found in writing either in the middle or at the end of a word (al-Hamd, 2016).

According to the research and observation conducted by the researcher, this feature is also not entirely implemented in the Braille Quran. There are four situations for those involving the addition of the letter *alif* (al-Hamd, 2016):

- xxi. *Alif* that is added in the middle of several words.
- xxii. *Alif* that is added after the letter *lam tawkid* involving one word in the *mushaf*.
- xxiii. *Alif* that is added after the letter *waw* at the end of *isim* or *fi'il* words.
- xxiv. *Alif* that is added at the end of several words.



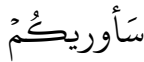
Table 4.13: *Ziyādah* of *alif* and its applications in the Braille Quran.

Types of <i>ziyādah</i>	<i>Rasm</i> in the <i>mushaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
<i>Alif</i> that is added in the middle of several words	لِشَآئِءٍ (Al-Kahfi: 23)	 	<i>Rasm Imlā'i</i>
<i>Alif</i> that is added after the letter <i>lam tawkid</i> involving one word in the <i>mushaf</i>	لَا أَذْبَحْنَهُ وَ (An-Naml: 21)	 	<i>Rasm Imlā'i</i>
<i>Alif</i> that is added after the letter <i>waw</i> at the end of <i>isim</i> or <i>fi'il</i> words	عَامُّوْا 		<i>Rasm Uthmānī</i>
<i>Alif</i> that is added at the end of several words	لَكَئِنَّا (Al-Kahfi: 38)	 	<i>Rasm Imlā'i</i>

There are two situations for those involving the addition of *waw* letters (al-Hamd, 2016), which are:

- xxv. *Waw* that is added in the word (أُولَئِكَ) and the words of the same type.
- xxvi. *Waw* that is added in the word (سَأُورِيكُمْ) in two locations in the al-Quran (*al-Anbiya*: 37) and (*al-A'raf*: 145).

Table 4.14: *Ziyādah* of *waw* and its applications in the Braille Quran.

Types of <i>ziyādah</i>	<i>Rasm</i> in the <i>mushaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
<i>Waw</i> that is added in the word <i>ulaika</i> (أُولَئِكَ) and the words of the same type.	أُولَئِكَ		<i>Rasm</i> ‘ <i>Uthmānī</i>
<i>Waw</i> that is added in the word <i>saarikum</i> (سَأُورِيكُمْ) in two locations in the al-Quran (<i>al-Anbiya</i> : 37) and (<i>al-A'raf</i> : 145)	سَأُورِيكُمْ	 	<i>Rasm</i> ‘ <i>Uthmānī</i>




There are two situations involving the addition of *ya* letters (al-Hamd, 2016), which are:

- xxvii. *Ya* that is added after:
 - *Hamzah kasrah,*

- *Hamzah fathah* that follows after a *kasrah* letter.

xxviii. *Ya* that is added at the end of the word that ends with *hamzah kasrah*.

Table 4.15: *Ziyādah* of *ya* and its applications in the Braille Quran.

Types of <i>ziyādah</i>	<i>Rasm</i> in the <i>mushaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
<i>Ya</i> that is added after: <i>Hamzah kasrah</i> and <i>hamzah fathah</i> that follows after a <i>kasrah</i> letter	أَفَايْنِ (<i>Ali-Imran</i> : 144)		<i>Rasm Imlā'i</i>
		أَفَانِ	
<i>Ya</i> that is added at the end of the word that ends with <i>hamzah kasrah</i>	بِأَيْدٍ (<i>Al-Zariyat</i> : 37)		<i>Rasm Imlā'i</i>
		بِأَيْدِ	
<i>Ya</i> that is added at the end of the word that ends with <i>hamzah kasrah</i>	نَّبَايٍ (<i>Al-An'am</i> : 34)		<i>Rasm Imlā'i</i>
		نَبَايِ	






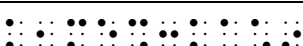

4.2.2.1.3 Al-Badl

In terms of Quranic writing, *al-Badl* refers to a letter that has been substituted with another letter. In *mushaf* writing, the letters involved in the substitution are *alif* letter that is converted to *waw* in various words, *alif* letter that is converted to *ya*, and *ha al-tanith/marbūthah* letter that are converted to the letter *ta* (al-Hamd, 2016).

According to the research and observation conducted by the researcher, this feature is also not entirely implemented in the Braille Quran. The situation in which the

alif letter is converted to *waw* in eight words (al-Hamd, 2016) is depicted in the following table.

Table 4.16: *Badl* of *alif* letter to *waw* and its applications in the Braille Quran.

Types of <i>Badl</i>	<i>Rasm</i> in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
<i>Alif</i> substituted with <i>waw</i>	الصَّلَاةُ	 الصَّلَاةُ	<i>Rasm</i> <i>Imlā'ī</i>
	الزَّكَاةُ	 الزَّكَاةُ	<i>Rasm</i> <i>Imlā'ī</i>
	الْحَيَاةُ	 الْحَيَاةُ	<i>Rasm</i> <i>Imlā'ī</i>
	الرِّبَا	 الرِّبَا	<i>Rasm</i> <i>Imlā'ī</i>
	بِالْعَدَاةِ (<i>al-An'am</i> : 52) & (<i>al-Kahf</i> : 28)	 بِالْعَدَاةِ	<i>Rasm</i> <i>Imlā'ī</i>
	كَمِشْكَاةٍ (<i>al-Nur</i> : 35)	 كَمِشْكَاةٍ	<i>Rasm</i> <i>Imlā'ī</i>
	التَّجَاوُزِ		<i>Rasm</i>

(<i>Ghafir</i> : 41)	التَّجَاة	<i>Imlā`i</i>
وَمَنَوَةٌ (<i>al-Najm</i> : 20)	وَمَنَاة	<i>Rasm Imlā`i</i>

The results of the analysis demonstrate that the use of *alif* letter in words in the Braille PERTIS *muṣḥaf* text is inconsistent with the *ibdal alif* to *waw* feature as applied to *Muṣḥaf al-Madīnah*. With a few exceptions, the letter *alif* letter that is converted to *ya* (al-Hamd, 2016) applies to words in which *lam* word is *alif*:

Table 4.17: *Badl* of *alif* letter to *ya* and its applications in the Braille Quran.

Types of <i>Badl</i>	<i>Rasm</i> in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
	الصَّفا (<i>Al-Baqarah</i> :158)	الصَّفا	<i>Rasm Uthmānī</i>
<i>Alif</i> substituted with <i>ya</i>	شَفَا (<i>Ali-Imran</i> : 103)	شَفَا	<i>Rasm Uthmānī</i>
	سَنَا (<i>An-Nur</i> : 43)	سَنَا	<i>Rasm Uthmānī</i>

ضِحِّ (Al-A'raf: 98)	⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī
تَلَّهَا (As-Syams: 2)	⠠⠠⠠⠠⠠⠠⠠⠠	Rasm Imlā’i
أَتَلَّكُمْ (Al-An’am: 40)	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm Imlā’i

The letter *ha al-tanith/marbūthah*, which is converted to the letter *ta*, appears in a variety of words, including:

Table 4.18: *Badl* of *ta marbūthah* letter to *ta maftuḥah* and its applications in the Braille Quran.

Types of <i>Badl</i>	Rasm in the <i>muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	Rasm status
	رَحْمَتٌ (Hud: 73) (al-Zukhruf: 32) (Maryam: 2)	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī
	رَحْمَتٌ	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī
<i>Ha al-tanith/marbūthah</i> substituted with <i>ta</i>	امْرَأَتٌ (Ali Imran: 35)	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī
	امْرَأَتٌ	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī
	نِعْمَتٌ (al-Baqarah: 211) (Ali Imran: 103) (al-Māidah: 11)	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī
	نِعْمَتٌ	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	Rasm ‘Uthmānī

سُنَّة	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠	<i>Rasm</i> ^c <i>Uthmānī</i>
(al-Anfal: 38) (Fathir: 43) (Ghafir: 75)	سُنَّة	






4.2.2.1.4 Writing of *Hamzah*

The letter *hamzah* is a letter whose reading is debated among Arab tribes. Some tribes, such as the Tamim and Qays, read *tahqiq*, while others, such as the Quraish tribe and the majority of Arab tribes in the Hijaz, read *takhfif*. Others who pronounce the letter *hamzah* in *tahqiq* write it with the letter *alif*, and those who pronounce it in *takhfif* write it with the letter that corresponds to its sound (al-Hamd, 2016).

Hamzah's letters are written using a range of special methodologies. The basis for these methods is where the *hamzah* letter appears in a word - at the beginning, middle, or end of the word. Another key consideration is the line of the *hamzah*. In addition, there are occasions when the methods of writing *hamzah* letters are not applied or are exempted.

For *hamzah* letter at the beginning of a word, either it is lined with *fathah*, *dammah* or *kasrah*, it is consistently written with *alif*. In the case where *hamzah* has an additional letter before it, such as *lam taukid* or *hamzah istifham*, it is then excluded from this general method.

Table 4.19: The writing of *hamzah* at the beginning of a word and its applications in the Braille Quran.

Position of <i>hamzah</i>	Form of writing in <i>Muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
	أَمَرَ (<i>al-Baqarah: 27</i>)	 أَمَرَ	<i>Rasm</i> ‘Uthmānī
	أُنزِلَ (<i>al-Baqarah: 4</i>)	 أُنزِلَ	<i>Rasm</i> ‘Uthmānī
<i>Hamzah</i> letter in the beginning of a word	إِيَّاكَ (<i>al-Fatihah: 5</i>)	 إِيَّاكَ	<i>Rasm</i> ‘Uthmānī
	وَلَيْنَ (<i>Ibrahim: 7</i>)	 وَلَيْنَ	<i>Rasm</i> ‘Uthmānī
	عَأَنْذَرْتَهُمْ (<i>al-Baqarah: 6</i>)	 عَأَنْذَرْتَهُمْ	<i>Rasm</i> <i>Imlā’i</i>

The letter *hamzah*, which appears in the middle of a word, alludes to whether it is marked with *sukoon* or vowel line. If *sukoon* is present, *hamzah* is written with *madd* letter the same sort of the *ḥarakāt* of the previous letter. If it is marked with a vowel line, it is then bound for either two conditions depending on its preceding letter, in which either the letter is marked *sukoon* or vowel line.

If the letter preceding the letter vowel-lined *hamzah* is marked with a *sukoon* and it is not the letter *alif*, no letter should substitute the writing of *hamzah*. However, if *alif* precedes *hamzah*, it will depend on the line/*ḥarakāt* of *hamzah* itself. In this situation, if the letter *hamzah* is in *fathah*, no letter should substitute the writing of

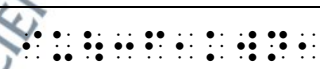
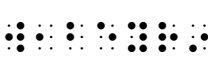
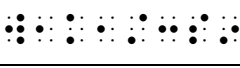
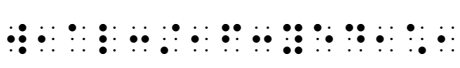
hamzah. On the other hand, if the letter *hamzah* is in *ḍammah*, the letter to substitute *hamzah* is *waw*. If the letter *hamzah* is in *kasrah*, the letter to substitute *hamzah* is *ya*.

Given the letter *hamzah* marked with any vowel line and is preceded by a vowel-lined letter, the situation is broken down into three categories. If the letter *hamzah* is in *fathah*:

- i. It is written as *alif* if the preceding letter is in *fathah*.
- ii. It is written as *waw* if the preceding letter is in *ḍammah*.
- iii. It is written as *ya* if the preceding letter is in *kasrah*.

Secondly, if the letter *hamzah* is in *ḍammah*, it is written as *waw* provided the preceding letter is lined with *fathah* or *ḍammah*. The third situation dictates that if the letter *hamzah* is in *kasrah* it is written as *ya*.

Table 4.20: The writing of *hamzah* in the middle of a word and its applications in the Braille Quran.

The situations of <i>hamzah</i> in the middle of a word	Form of writing in <i>Muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
	يُؤفِّكونَ (<i>al-Māidah</i> : 75)		<i>Rasm</i> <i>Uthmānī</i>
Hamzah with <i>sukoon</i>	وَبِئْرٍ (<i>al-Hajj</i> : 45)		<i>Rasm</i> <i>Uthmānī</i>
	وَكَايَسٍ (<i>al-Waqi 'ah</i> : 18)		<i>Rasm</i> <i>Uthmānī</i>
A vowel-lined	وَالْأَفْئِدَةَ		<i>Rasm</i> <i>Imlā'i</i>

hamzah with its preceding letter in <i>sukoon</i>	(<i>al-Mulk</i> : 23)	وَالْأَفِيدَةَ	
		مَسْئُولًا	Rasm Imlā'i
	(<i>Israa</i> : 34)	مَسْئُولًا	
		أَبْنَاءَنَا	Rasm Uthmānī
	(<i>Ali Imran</i> : 61)	أَبْنَاءَنَا	
		وَأَبْنَاءَكُمْ	Rasm Uthmānī
	(<i>Ali Imran</i> : 61)	وَأَبْنَاءَكُمْ	
		وَنِسَاءَكُمْ	Rasm Uthmānī
	(<i>Ali Imran</i> : 61)	وَنِسَاءَكُمْ	
A vowel-lined hamzah with its preceding letter also in vowel		سَأَلَ	Rasm Uthmānī
	(<i>al-Ma'arij</i> : 1)	سَأَلَ	
		الْفُؤَادُ	Rasm Uthmānī
	(<i>al-Najm</i> : 11)	الْفُؤَادُ	
		السِّيَّاتِ	Rasm Uthmānī
	(<i>Yunus</i> : 27)	السِّيَّاتِ	
		يَذْرُؤُكُمْ	Rasm Uthmānī
	(<i>al-Shura</i> : 11)	يَذْرُؤُكُمْ	
	يَيْسَ	Rasm Uthmānī	
(<i>al-Mumtahanah</i> : 13)	يَيْسَ		
	سُئِلَتْ	Rasm Uthmānī	
(<i>al-Takwir</i> : 8)	سُئِلَتْ		

As for *hamzah* located at the end of a word, it depends on the situation whether its preceding letter is in *sukoon* or vowel. If the preceding letter is in *sukoon*, the letter *hamzah* is written without being represented by any *madd* letters. If the preceding letter is a vowel, the letter *hamzah* is written *madd* letters bearing the same type of *ḥarakāt* of the previous letter, which is *alif* for *fathah*, *waw* for *ḍammah* and *ya* for *kasrah*.

Table 4.21: The writing of *hamzah* at the end of a word and its applications in the Braille Quran.

The situations of <i>hamzah</i> at the end of a word	Form of writing in <i>Muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
The letter before <i>hamzah</i> is in <i>sukoon</i>	دِفَاءٌ		<i>Rasm Imlā'i</i>
	شَيْءٌ		<i>Rasm 'Uthmānī</i>
The letter before <i>hamzah</i> is with vowel-line	قُرْءٌ		<i>Rasm 'Uthmānī</i>
	ذَرَأٌ		<i>Rasm 'Uthmānī</i>
The letter before <i>hamzah</i> is with vowel-line	قُرِيٌّ		<i>Rasm 'Uthmānī</i>
	لَوْلُوٌّ		<i>Rasm 'Uthmānī</i>

4.2.2.1.5 Connection or separation between words

In general, each word must be written separately between the words before and after in the Arabic language writing style. Subsequently, each letter in the word must be written in connection to each other except for letters that cannot be connected, such as *alif*, *dal*, *dhal*, *ra*, *zay* and *waw*.



















From the perspective of the *muṣḥaf* writing in *Rasm ‘Uthmānī*, there are words that are written separately from the ones before or after them in some situations but are written together in situations. Al-Imam al-Mahdawi has separated this fifth characteristic of the *Rasm ‘Uthmānī* into two scenarios, which are:

- i. The connection or separation linked with the *idgham* between two words:

There are eight different word combinations in this case. There are places written separately and places written as connected for each of these combinations.

Table 4.22: The connection or separation linked with the *idgham* between two words and its applications in the Braille Quran.

No.	The situations whether the <i>idgham</i> determines the connection or separation between two words	Form of writing in <i>Muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
1)	All is written connected except in ten places: <i>Al-A'raf</i> : 105 and 169 <i>Al-Taubah</i> : 118 <i>Hud</i> : 14 and 26 <i>Al-Haj</i> : 26 <i>Yasin</i> : 60	أَلَا	⠠⠠⠠⠠⠠⠠⠠ _____⠠⠠	<i>Rasm ‘Uthmānī</i>
		أَنَّ لَا	⠠⠠⠠⠠⠠⠠⠠⠠⠠	<i>Rasm ‘Uthmānī</i>

	<p><i>Al-Dukhan: 19</i> <i>Al-Mumtahanah: 12</i> <i>Al-Qalam: 24</i></p>	أَنَّ لَا		
	<p>All is written connected except in three places: <i>Al-Nisa: 25</i> <i>Al-Rum: 28</i> <i>Al-Munafiqun: 10</i></p>	مِمَّا	 <hr/> 	<p>Rasm ‘Uthmānī</p>
2)		مِنْ مَا	 <hr/> 	<p>Rasm ‘Uthmānī</p>
	<p>All is written separately except in two places: <i>Al-Kahf: 48</i> <i>Al-Qiyamah: 3</i></p>	أَلَّنَّ	 <hr/> 	<p>Rasm ‘Uthmānī</p>
3)		أَنَّ لَنْ	 <hr/> 	<p>Rasm ‘Uthmānī</p>
4)	<p>All is written separately.</p>	عَنْ مَنْ	 <hr/> 	<p>Rasm ‘Uthmānī</p>
	<p>All is written connected except for this place: <i>Al-A'raf: 166</i></p>	عَمَّا	 <hr/> 	<p>Rasm ‘Uthmānī</p>
5)		عَنْ مَا	 <hr/> 	<p>Rasm ‘Uthmānī</p>
	<p>All is written separately except for this place: <i>Hud: 14</i></p>	فَأَنَّ لَمْ	 <hr/> 	<p>Rasm ‘Uthmānī</p>
6)		فَإِلَّمَّ	 <hr/> 	<p>Rasm ‘Uthmānī</p>

7)	All is written connected except for this place: <i>Al-Ra 'd</i> : 40	وَأَمَّا		<i>Rasm</i> ^c <i>Uthmānī</i>
		وَأَمَّا		
		وَأَنَّ مَا		<i>Rasm</i> ^c <i>Uthmānī</i>
		وَأَنَّ مَا		
8)	All is written connected except in four places: <i>Al-Nisa</i> : 109 <i>Al-Taubah</i> : 109 <i>Al-Saffat</i> : 11 <i>Fussilat</i> : 40	أَمَّنَّ		<i>Rasm</i> ^c <i>Uthmānī</i>
		أَمَّنَّ		
		أَمَّ مَنْ		<i>Rasm</i> ^c <i>Uthmānī</i>
		أَمَّ مَنْ		


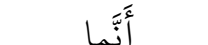





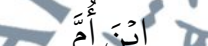

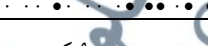



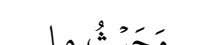
ii. Connection or separation that has nothing to do with *idgham*.

There are ten different combinations of two words in this situation. There is a place written in separation for each of these combinations, as well as a place written in a connected form.

Table 4.23: Connection or separation between two words that has nothing to do with *idgham* and its applications in the Braille Quran.

No.	The situations whether there is a connection or separation between two words	Form of writing in <i>Muṣḥaf al-Madīnah</i>	Applied writing in the PERTIS Braille Quran	<i>Rasm</i> status
1)	All is written connected except in eleven places:	فيما		<i>Rasm</i> ^c <i>Uthmānī</i>

	<p><i>Al-Baqarah</i>: 240 <i>Al-Māidah</i>: 48 <i>Al-An'am</i>: 145 and 165 <i>Al-Anbiya</i>: 102 <i>Al-Nur</i>: 14 <i>Al-Syua'ara</i>: 146 <i>Al-Rum</i>: 28 <i>Al-Zumar</i>: 3 <i>Al-Waqi'ah</i>: 46 and 61</p>	<p>فِي مَا</p> <p>فِي مَا</p>	<p>فِي مَا</p> <p>فِي مَا</p>	<p>Rasm <i>Uthmānī</i></p> <p>Rasm <i>Uthmānī</i></p>
2)	<p>Written as connected in four places: <i>Ali Imran</i>: 153 <i>Al-Hajj</i>: 5 <i>Al-Ahzab</i>: 50 <i>Al-Hadid</i>: 23</p>	<p>لِئِي لَا</p> <p>لِئِي لَا</p> <p>لِئِي لَا</p> <p>لِئِي لَا</p>	<p>لِئِي لَا</p> <p>لِئِي لَا</p> <p>لِئِي لَا</p> <p>لِئِي لَا</p>	<p>Rasm <i>Uthmānī</i></p> <p>Rasm <i>Uthmānī</i></p>
3)	<p>Written as connected in three places: <i>Al-Baqarah</i>: 90 <i>Al-Baqarah</i>: 93 <i>Al-A'raf</i>: 150</p>	<p>بِئْسَمَا</p> <p>بِئْسَمَا</p> <p>فَبِئْسَ مَا</p> <p>فَبِئْسَ مَا</p>	<p>بِئْسَمَا</p> <p>بِئْسَمَا</p> <p>فَبِئْسَ مَا</p> <p>فَبِئْسَ مَا</p>	<p>Rasm <i>Uthmānī</i></p> <p>Rasm <i>Uthmānī</i></p>
4)	<p>Written as connected in five places: <i>Al-Baqarah</i>: 115 <i>Al-Nahl</i>: 76 <i>Al-Nisa</i>: 78 <i>Al-Ahzab</i>: 61</p>	<p>أَيْنَمَا</p> <p>أَيْنَمَا</p> <p>أَيْنَ مَا</p> <p>أَيْنَ مَا</p>	<p>أَيْنَمَا</p> <p>أَيْنَمَا</p> <p>أَيْنَ مَا</p> <p>أَيْنَ مَا</p>	<p>Rasm <i>Uthmānī</i></p> <p>Rasm <i>Uthmānī</i></p>
5)	<p>All is written connected except in: <i>Al-An'am</i>: 134</p>	<p>أَنَا مَا</p> <p>أَنَا مَا</p>	<p>أَنَا مَا</p> <p>أَنَا مَا</p>	<p>Rasm <i>Uthmānī</i></p> <p>Rasm <i>Uthmānī</i></p>
6)	<p>Written separately in two places:</p>	<p>وَأَنَّ مَا</p>	<p>وَأَنَّ مَا</p>	<p>Rasm <i>Uthmānī</i></p>

	<i>Al-Hajj</i> : 32 <i>Luqman</i> : 30	وَأَنَّ مَا		<i>Rasm</i> <i>Uthmānī</i>
		أَنَّمَا		
7)	Written as connected except in three places: <i>Ibrahim</i> : 34 <i>Al-Nisa</i> : 91 <i>Al-Mukminun</i> : 44	كُلَّمَا		<i>Rasm</i> <i>Uthmānī</i>
		كُلِّمَا		
		كُلِّ مَا		<i>Rasm</i> <i>Uthmānī</i>
		كُلِّ مَا		
8)	Written separately in <i>surah al-A'raf</i> : 150 but is written as connected in <i>surah Taha</i> : 94	ابْنِ أُمَّ		<i>Rasm</i> <i>Uthmānī</i>
		ابْنِ أُمَّ		
		يَا ابْنِ أُمَّ		<i>Rasm</i> <i>Imlā'i</i>
		يَا ابْنِ أُمَّ		
9)	All is written separately in four places: <i>Al-Nisa</i> : 78 <i>Al-Kahf</i> : 49 <i>Al-Furqan</i> : 7 <i>Al-Ma'arij</i> : 36	مَالٍ		<i>Rasm</i> <i>Uthmānī</i>
		مَالٍ		
10)	All is written as connected in two places: <i>Al-Baqarah</i> : 144 and 150	وَحَيْثُ		<i>Rasm</i> <i>Uthmānī</i>
		وَحَيْثُ مَا		

4.2.2.2 Application of Dabt for Harakat and other Markings in the Braille

Quran

Fundamentally, the Quran's *mushaf* only contains letters written in the *Rasm* ^{Uthmānī} style of writing. After a few years, gradual updates to this text began to be made. Among the first markings that are placed alongside the original Quranic text are the dots that indicate the ending of each verse, followed by the red *I'rab* dots, as well as long lines that separate between two *surahs*, and so on (al-Hamad, 2018). The aspects of addition to the composition of the Quran's text expanded and evolved with time, until it became as complicated as it is today. Essentially, certain scholars insist on the placing of particular additions in order to maintain the accuracy of the Quran's recitation.

Ghanim Qadduri (2018) divides the elements of addition to the original text of al-Quran *Rasm* into three categories:

1. Additions involving the guide to pronunciation such as the signs of *ḥarakāt*, *sukoon*, *tashdid*, *mad* and *hamzah*.
2. Additions that do not involve the process of pronunciation, but rather the guides on Quranic verses such as the pacing of information at the beginning of *surah*, information in the number of verses, division of *hizb* and *juz*.
3. Ornamental additions such as frames for page numbers, the partition between two *surah*, decorated bracket for verse numbers, information on *hizb* and *juz* as well as marking for *sajdah* verses.

Upon investigating the text, the researcher discovered that the findings for the elements of addition to the *rasm* employed in the PERTIS Braille Quran only cover two parts of the aforementioned categories. The researcher has organised the elements more

specifically and selectively to improve the presentation and analysis process, and then divided them into five groups as follows:

- Markings that facilitate letter articulation (*ḥarakāt*) and special pronunciation marks
- Markings on *waqf*
- Division and segmentation of *juz* in al-Quran
- Brief documentation on *surah*
- Verse numbering, markings on *sajdah* and placement of *saktah*

4.2.2.2.1 Marking applications that facilitate the pronunciation of letter sounds (*ḍabṭ al-ḥarakāt*)

There are placements of *ḍabṭ* in the PERTIS Braille Quran that has been tailored to the uniqueness of Braille writing in the *mushaf*. These marks, like other Braille letters, are converted into Braille code. When compared to the inscription in a typical *mushaf*, there is a difference in the point of application of such signs. Among them, for instance, are lines that indicate the sound of a letter, which are put either before or after the related letters, rather than in the forms of *fathah*, *kasrah* or *ḍammah*, as in a typical *mushaf*. Visual symbols such as star symbols as *juz/ḥizb* border markers, dome symbols as an indication of *sajdah*, diamond symbol as the *imālah* sign, and other visual symbols have also had their application in the PERTIS Braille Quran altered. This is to accommodate readers who read with their touch sense, which is distinct from those who read with their visual sense.

4.1.1.1.1.1 List of Quranic Markings/*Dabṭ* applied in the PERTIS Braille

Quran

The followings are instances of *dabṭ* and how each of them is applied in the writing of the PERTIS Braille Quran:

- i. *Faṭḥah* (dot 2), *ḍammah* (dots 1,3,6), *kasrah* (dots 1,5), *sukoon* (dots 2,5) and *syaddah* (dot 6). These are the most commonly used basic reading markers. Each letter in the PERTIS Braille Quran is usually followed by these lines. Only the *syaddah* sign is placed before the letter that must be read. The following is a list of the signs, together with their Braille codes and differences from the point of application with the *Muṣḥaf al-Madīnah*:

Table 4.24: Primary *dabṭ* with their Braille codes including their applications in the *Muṣḥaf al-Madīnah*.

Marks	Applications in the PERTIS Braille Quran	Differences with the applications in the <i>Muṣḥaf al-Madīnah</i>
<i>Faṭḥah</i>	⠠	The <i>faṭḥah</i> line is not placed if there is <i>alif</i> or small <i>alif</i> or <i>alif maqṣūrah</i> letter after the particular letter.
<i>Ḍammah</i>	⠡	The <i>ḍammah</i> line is not placed if there is <i>waw</i> or tiny <i>waw</i> letter after the particular letter.
<i>Kasrah</i>	⠢	The <i>kasrah</i> line is not employed if there is <i>ya</i> or tiny <i>ya</i> letters after the particular letter.
<i>Sukoon</i>	⠣	All <i>sukoon</i> letters are assigned <i>sukoon</i> signs even though the letters are not under <i>izhār</i>

<i>Sabdu/Tashdīd</i>	⠠⠨	Letters under <i>idgham</i> rule are not assigned with <i>sabdu/tashdid</i> .
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- ii. The *tanwīn* marks are *fathataīn* (dots 2,3), *ḍammataīn* (dots 2,6) and *kasrataīn* (dots 3,5). In contrast to the *muṣḥaf* of the *al-Madīnah*, which uses two types of *tanween* - *tanween tarkīb* (parallel) and *tanween itbā'* (non-parallel) - there is just one type of *tanween* in the *muṣḥaf* of the Braille Quran. As a result, in the *muṣḥaf* of the Braille Quran, there is no *tajweed* application for *tanween*. The following table displays the list of the signs, together with their Braille codes and the differences between them and the *Muṣḥaf al-Madīnah* application point.

Table 4.25: *Tanween* marks with their Braille codes including their differences in terms of applications in the *Muṣḥaf al-Madīnah*.

Marks	Applications in the PERTIS Braille Quran	Differences with the applications in the <i>Muṣḥaf al-Madīnah</i>
<i>Fathataīn</i>	⠠⠨	No differences between <i>fathatain tarkīb</i> and <i>fathatain itbā'</i> .
<i>Ḍammataīn</i>	⠠⠨	No differences between <i>ḍammatain tarkīb</i> and <i>ḍammatain itbā'</i> .
<i>Kasrataīn</i>	⠠⠨	No differences between <i>kasratain tarkīb</i> and <i>kasratain itbā'</i> .

- iii. The small *alif* (dot 4) in the middle of a word. It indicates that the letter has to be pronounced even it is not in the *rasm*. Its application, however, is not standardised according to *ḥadhf alif* method of the *Rasm ʿUthmānī*.

Table 4.26: The small *alif* with its Braille code including its differences in terms of applications in the *Muṣḥaf al-Madīnah*

Mark	Applications in the PERTIS Braille Quran	Differences with the applications in the <i>Muṣḥaf al-Madīnah</i>
The small <i>alif</i>	⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠	Inconsistent as the PERTIS Braille Quran irregularly adopting the <i>ḥadhf alif</i> method of the <i>Rasm ʿUthmānī</i> .

- iv. The long *madd* sign (dots 2,4,6). This sign is only placed with *muqāṭṭaʿah* letters (at the beginning of *surah*) that must be recited with *madd* of over 2 *ḥarakāt* (*madd lāzim ḥarfī*).

Table 4.27: The long *madd* with its Braille code including its differences in terms of applications in the *Muṣḥaf al-Madīnah*.

Mark	Applications in the PERTIS Braille Quran	Differences with the applications in the <i>Muṣḥaf al-Madīnah</i>
Long <i>madd</i>	⠠⠠⠠	Not used except for <i>muqāṭṭaʿah – madd lāzim ḥarfī</i>

- v. Dots (3,4,5) for *hamzah mamdūdah* letters that are recited 2 *ḥarakāt* (*hamzah + alif*) (*madd badal*).

Table 4.28: *Hamzah mamdūdah* with its Braille code including its differences in terms of applications in the *Muṣḥaf al-Madīnah*.

Mark	Applications in the PERTIS Braille Quran	Differences with the applications in the <i>Muṣḥaf al-Madīnah</i>
<i>Hamzah mamdūdah</i>	<p style="text-align: center;">⠠</p> <p style="text-align: center;">⠠⠠⠠⠠⠠⠠</p> <p style="text-align: center;">⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠</p>	Not applied in the <i>muṣḥaf al-Madīnah</i> , but is written separately between <i>hamzah</i> , <i>fathah</i> and <i>alif</i> .

vi. Dots (2,3,5,6) indicate the end of a verse or bracket.

Table 4.29: The mark for the end of a verse or bracket with its Braille code including its differences in terms of applications in the *Muṣḥaf al-Madīnah*.

Mark	Applications in the PERTIS Braille Quran	Differences with the applications in the <i>Muṣḥaf al-Madīnah</i>
End of verse/ bracket	<p style="text-align: center;">⠠</p> <p style="text-align: center;">⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠</p>	Not applied in the <i>Muṣḥaf al-Madīnah</i>

vii. Each *juz* is ended with dots (2,4) 9 times.

viii. Each *surah* is ended with dots (2,5) 12 times.

ix. Noting the *Ishmām* recitation by writing the word إشمām in bracket (dots 2,3,5,6) after the words that must be read in conjunction with the ruling (refer *surah Yusuf*, verse 11, volume 3, page 56).

Table 4.34: Tiny *waw* and tiny *ya*, with their Braille codes including their differences in terms of applications in the *Muṣḥaf al-Madīnah*

Mark	Applications in the PERTIS Braille Quran
Tiny <i>waw</i>	⠄⠔⠔
Tiny <i>ya</i>	⠄⠔⠕

The number of applications and markings/*dabt* in PERTIS Braille Quran was also discovered to be fewer than the quantity applied in the *Muṣḥaf al-Madīnah* as a result of this examination. This implies that the *Muṣḥaf al-Madīnah* has various markings/*dabt* that are not present in the PERTIS Braille Quran.

4.2.2.2.2 Application of markings related to *waqf*

The PERTIS Braille Quran shares many similarities with the Braille Quran published by the Islamic Tunanetra Wellbeing Foundation (YAKETUNIS), Jogjakarta, Indonesia. The use of *waqf* signage is one of the many striking commonalities. Based on the *ijtihad* of scholars of *waqf* and *ibtida*, the *waqf* symbol was developed by al-Quran’s author or printer. Its purpose is to make it easier for al-Quran readers to avoid misinterpreting the *kalamullah* phrases while also assisting *muṣḥaf* readers in better understanding the meaning of the *kalamullah*. *Waqf* is not a part of al-Quran’s *rasm*. As a result, it is *ijtihadi* in nature, in which it may accept adjustments in the form of addition or subtraction. When comparing the placement and use of the *waqf* symbol between the Braille Quran produced by PERTIS and the typical *muṣḥaf* that adheres to the standard

of Mujamma' Malik Fahd, which the latter serves as a guide in Malaysia, a substantial discrepancy can be observed.

Mujamma' Malik Fahd's standard *muṣḥaf* today uses only five *waqf* signs, which are the *waqf* sign indicating the place where the recitation should be stopped (*waqf lāzim*), the *waqf* sign indicating that the continuation of the recitation is better (*waṣl awla*), the *waqf* sign indicating that the stopping of the recitation is better (*waqf awla*), the *waqf* sign indicating the permissible place to stop recitation (*waqf jaiz*), and the *waqf* sign indicating the option to stop in either two consecutive places (*waqf ta'ānuq*).

In contrast to Mujamma' Malik Fahd's standard *muṣḥaf* (*muṣḥaf al-Madīnah*), the PERTIS Braille Quran contains eleven *waqf* markings. Five of these markings are those mentioned above, with the addition of five other markings – *waqf mutlaq*, *waqf mujawwaz*, *waqf murakkhas*, the sign represented by the letter *qaf* meaning it is permissible to stop but it is better to continue reciting, the sign represented by *qaf* and *fa* which indicates better to stop, and the sign of *waqf lam alif* which means not to stop reciting. The following is a list of *waqf* marks found in the Braille Quran, along with notes on how they differ from the *muṣḥaf al-Madīnah*:

Table 4.35: *Waqf* markings with their Braille codes including their differences in terms of applications in the *Muṣḥaf al-Madīnah*.

No	<i>Waqf</i> markings in the PERTIS Braille Quran	Braille code form	Notes on the differences with the <i>muṣḥaf al-Madīnah</i>
1	<i>Waqf Lāzim mīm</i>	⠠⠠⠠	The same mark used in the <i>muṣḥaf al-Madīnah</i>
2	<i>Waṣl awla</i>	⠠⠠⠠⠠⠠	The same mark used in the <i>muṣḥaf al-Madīnah</i>

3	<i>Waqf awla</i>	⠠⠠⠠⠠	The same mark used in the <i>muṣḥaf al-Madīnah</i>
4	<i>Waqf jaiz</i>	⠠⠠	The same mark used in the <i>muṣḥaf al-Madīnah</i>
5	<i>Waqf ta'ānuq</i>	⠠⠠	The same mark used in the <i>muṣḥaf al-Madīnah</i>
6	<i>Waqf mutlaq</i>	⠠⠠	Not applied in the <i>muṣḥaf Madinah</i>
7	<i>Waqf mujawwaz</i>	⠠⠠	Not applied in the <i>muṣḥaf Madinah</i>
8	<i>Waqf murakhhkhas</i>	⠠⠠	Not applied in the <i>muṣḥaf Madinah</i>
9	<i>Waqf qaf</i>	⠠⠠	Not applied in the <i>muṣḥaf Madinah</i>
10	<i>Waqf qaf fa</i>	⠠⠠⠠	Not applied in the <i>muṣḥaf Madinah</i>
11	<i>Waqf lam alif</i>	⠠⠠	Not applied in the <i>muṣḥaf Madinah</i>

All *waqf* marks in the Braille Quran's *muṣḥaf* text are preceded by code 3,6. The placement of code 3,6 is designed to alert the reader that the letter written following it is an additional text to *kalamullah*, rather than a message from Him.

4.2.2.2.3 Application of division and segmentation of *juz* of al-Quran

Division of Quranic text into *juz*

The 114 *surahs* of al-Quran are divided into 30 *juz*. Al-Quran has been divided into 1/2, 1/3, 1/5, 1/7, 1/9, and so on from the time of the Companion RA. This division is more of a way of memorising and daily practice or a method of determining the rate

of recitation in prayer. The division of al-Quran, according to Kahilah (2021), is sanctioned for the purpose of repose and convenience of memory.

This division is not marked in the early stages of al-Quran's *muṣḥaf*. On the directive by al-Hajjaj bin Yusuf al-Thaqafi, this particular division began to be inserted in the *muṣḥaf* of al-Quran on the side of the *muṣḥaf* page of al-Quran, along with other additions of new terms pertaining to the punctuation marks (al-Hamad, 2018).

The al-Quran which has been divided into 30 *juz* is subsequently segmented into 60 *hizb*. As can be found in today's al-Quran *muṣḥaf*, the *hizb* mark is placed on the side of the *muṣḥaf* page to denote the first, second, and subsequent *hizb*. Each *hizb* is broken down into four sections: 1/4 (*rubu' hizb*), 1/2 (*nisfu hizb*) and 3/4 (*thalathah 'arba' hizb*).

Certain *muṣḥaf* feature each *surah* into a series of *ruku'*, each of which is denoted by the letter 'ain. The mark is located on the side of the *muṣḥaf* page. An al-Quran consists of 556 *ruku'*. Long *surahs* consist of numerous *ruku'* while shorter *surahs* such as *surah al-Nas*, *al-Ikhlās*, *Quraysh*, and others have only one *ruku'*. The sign is posted as a *waqf* guide to facilitate doing the *ruku'* for individuals who recite al-Quran during prayer. The reason for this is that the symbol denotes the end of a tale or lesson episode.

Between the Braille Quran released by PERTIS and the *muṣḥaf al-Madīnah* published by Mujamma' Malik Fahd, there are various distinct places where the beginning/end of the *juz* are placed. According to the researcher's observations, this is due to the source of the text which was copied by the publisher of the PERTIS Braille Quran - that is, the YAKETUNIS Braille Quran text - is drawn from the Quran Majeed

muṣḥaf of the Indian/Pakistan publishing. The similarities and differences in the initial location of *juz* between the two *muṣḥafs* are detailed in the table below.

Table 4.36: Differences in the initial location of *juz* between the PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

<i>Juz</i> no.	Beginning of <i>juz</i> in PERTIS Braille Quran	Beginning of <i>juz</i> in <i>muṣḥaf al-Madīnah</i>
1	<i>Al-Fatihah</i> : 1	<i>Al-Fatihah</i> : 1
2	<i>Al-Baqarah</i> : 142 (v. 1, p. 32)	<i>Al-Baqarah</i> : 142 (p. 22)
3	<i>Al-Baqarah</i> : 253 (v. 1, p. 63)	<i>Al-Baqarah</i> : 253 (p. 42)
4	<i>Ali Imran</i> : 92 (v. 1, p. 94)	<i>Ali Imran</i> : 93 (p. 62)
5	<i>Al-Nisa</i> : 24 (v. 1, p. 125)	<i>Al-Nisa</i> : 24 (p. 77)
6	<i>Al-Nisa</i> : 148 (v. 2, p. 1)	<i>Al-Nisa</i> : 148 (p. 102)
7	<i>Al-Māidah</i> : 83 (v. 2, p. 32)	<i>Al-Māidah</i> : 82 (p. 121)
8	<i>Al-An'am</i> : 111 (v. 2, p. 65)	<i>Al-An'am</i> : 111 (p. 142)
9	<i>Al-A'raf</i> : 88 (v. 2, p. 96)	<i>Al-A'raf</i> : 88 (p. 162)
10	<i>Al-Anfal</i> : 41 (v. 2, p. 128)	<i>Al-Anfal</i> : 41 (p. 182)
11	<i>Al-Taubah</i> : 94 (v. 3, p. 1)	<i>Al-Taubah</i> : 93 (p. 201)
12	<i>Hud</i> : 6 (v. 3, p. 33)	<i>Hud</i> : 6 (p. 222)
13	<i>Yusuf</i> : 53 (v. 3, p. 65)	<i>Yusuf</i> : 53 (p. 242)
14	<i>Al-Hijr</i> : 1 (v. 3, p. 96)	<i>Al-Hijr</i> : 1 (p. 262)
15	<i>Al-Isra</i> : 1 (v. 3, p. 130)	<i>Al-Isra</i> : 1 (p. 282)
16	<i>Al-Kahf</i> : 75 (v. 4, p. 1)	<i>Al-Kahf</i> : 75 (p. 302)
17	<i>Al-Anbiya</i> : 1 (v. 4, p. 37)	<i>Al-Anbiya</i> : 1 (p. 322)
18	<i>Al-Mukminun</i> : 1 (v. 4, p. 68)	<i>Al-Mukminun</i> : 1 (p. 342)

19	<i>Al-Furqan</i> : 21 (v. 4, p. 103)	<i>Al-Furqan</i> : 21 (p. 362)
20	<i>Al-Naml</i> : 60 (v. 4, p. 140) *no juz divider sign	<i>Al-Naml</i> : 56 (p. 382)
21	<i>Al-Ankabut</i> : 45 (v. 5, p. 1)	<i>Al-Ankabut</i> : 46 (p. 402)
22	<i>Al-Ahzab</i> : 31 (v. 5, p. 35)	<i>Al-Ahzab</i> : 31 (p. 422)
23	<i>Yasin</i> : 22 (v. 5, p. 68)	<i>Yasin</i> : 28 (p. 442)
24	<i>Al-Zumar</i> : 32 (v. 5, p. 107)	<i>Al-Zumar</i> : 32 (p. 462)
25	<i>Fussilat</i> : 47 (v. 5, p. 139)	<i>Fussilat</i> : 47 (p. 482)
26	<i>Al-Ahqaf</i> : 1 (v. 6, p. 1)	<i>Al-Ahqaf</i> : 1 (p. 502)
27	<i>Al-Zariyat</i> : 31 (v. 6, p. 36)	<i>Al-Zariyat</i> : 31 (p. 522)
28	<i>Al-Mujadalah</i> : 1 (v. 6, p. 75)	<i>Al-Mujadalah</i> : 1 (p. 542)
29	<i>Al-Mulk</i> : 1 (v. 6, p. 110)	<i>Al-Mulk</i> : 1 (p. 562)
30	<i>Al-Naba</i> : 1 (v. 6, p. 151)	<i>Al-Naba</i> : 1 (p. 582)

According to the above analysis, there are six variations in the division of *juz* between the *muṣḥaf* of the PERTIS Braille Quran and the *muṣḥaf al-Madīnah*. The most major variation is observed in *juz* 20 and 23, where the *muṣḥaf* of the PERTIS Braille Quran places the beginning of *juz* 20 four verses earlier than the *muṣḥaf al-Madīnah*, while its *juz* 23 begins six verses after the *muṣḥaf al-Madīnah*. Apart from these two locations, the remaining four variations are all based on a single verse early or later, which are in *juz* 4, *juz* 7, *juz* 11 and *juz* 21.

The *muṣḥaf* of the PERTIS Braille Quran, unlike the *muṣḥaf al-Madīnah*, contains a dividing sign between each constituent. Dots 2,4 represent this dividing sign, which appears nine times in the centre of the page at the end of each *juz*.

4.2.2.2.4 Documentation for the opening of *surah*

Ibnu al-Manzur (2018) defined '*surah*' in *Lisan al-'Arab* as:

والسورة : المتزلة، والجمع سور، والسورة من البناء: ما حسن وطال

Meanings: “*Surah* means: Position, its plural is: *Suwar*, *Surah* in its composure is something good and high”.

Ghanim Qadduri al-Hamad (2018) asserts that the early *muṣḥafs* of the al-Quran do not contain any indicators marking the beginning of a *surah*. A single empty line separates each *surah* from the next *surah*. The insertion of one or two horizontal lines along the *muṣḥaf* sheet of paper is one of the markers used to state the beginning of a *surah*.

Apart from that, there is also narration on the setting of lines and *Basamalah* between each *surah*. It was narrated by Imam Ahmad, Abu Dawud, al-Tirmizi:

عن يزيد قال قال لنا ابن عباس رضي الله عنه: "فلت لعثمان بن عفان: ما حملكم على أن عمدتم إلى الأنفال وهي من المثاني وإلى براءة، وهي من المعين، فقرنتم بينهما ولم تكتبوا بينهما سطر بسم الله الرحمن الرحيم، ووضعتموها في السبع الطوال، ما حملكم على ذلك؟ قال عثمان رضي الله عنه: "إن رسول الله صلى الله عليه وسلم كان مما يأتي عليه الزمان ينزل عليه من السور ذوات العدد، وكان إذا أنزل عليه الشيء يدعو بعض من يكتب عنده يقول: "ضعوا هذا في السورة التي يذكر فيها كذا وكذا"، وينزل عليه الآيات فيقول: "ضعوا هذه الآيات في السورة التي يذكر فيها كذا وكذا"، وكانت الأنفال من أوائل ما أنزل بالمدينة وبراءة من آخر القرآن، فكانت قصتها شبيها بقصتها، فقبض رسول الله صلى الله عليه وسلم ولم يبين لنا

أنها منها، وظننت أنها منها، فمن ثم قرنت بينهما، ولم أكتب بينهما سطرا بسم الله الرحمن الرحيم". رواه أحمد وأصحاب السنن الثلاثة وصححه ابن حبان والحاكم.

Meaning:

Narrated from Yazid, Ibn ‘Abbas (رضي الله عنه) said to us: “I said to ‘Uthman bin ‘Affan: What made you take al-Anfal, which is one of al-Mathani (the seven long soorahs), and Bara`ah, which is one of al-Mi`een (soorahs with one hundred verses or thereabouts), and put them next to one another and not write - Ibn Ja`far said: A line between them saying Bismillahir-Rahmanir-Raheem - and you put them with the seven long ones? What made you do that? ‘Uthman (رضي الله عنه) said: Sometimes many soorahs would be revealed (incomplete) to the Messenger of Allah (ﷺ), and when something was revealed he would call one of the scribes to write it down for him and say: “Put this in the Soorah in which such and such is mentioned”; and verses would be revealed to him and he would say, “Put these verses in the soorah in which such and such is mentioned”; and a verse would be revealed to him and he would say: “Put this verse in the soorah in which such and such is mentioned.” Al-Anfal was one of the first soorahs to be revealed in Madinah and Bara`ah was one of the last soorahs of the Qur`an, and the stories and content of the two soorahs were similar. Then the Messenger of Allah (ﷺ) passed away without having stated clearly to us that it was part of it, but we thought that it was, hence I put them together and I did not put between them the line Bismillahir-Rahmanir-Raheem.”

(Hadith. Musnad Ahmad. Kitāb Musnad Uthman bin‘Affan Rodiallahuanhu: Yazeed: Juz’ 4:#399) and (Hadith.Abi Dawud. Kitāb Ṣolāt: Bāb Man Jaharo bihā:Uthman bin ‘Affān: Juz’ 127:#786) and (Hadith. at-Tirmizi. Kitāb Tafsir al-Quran ‘an Rasulullah Sollahi ‘Alaihi Wasallam: Bāb Wamin Surah at-Taubah:Ibnu Abbas: Juz’ 10:#3086).

Nowadays, all printed *mushafs* have a distinct approach for placing the indicator for the beginning of surah. Some publishers present some of the most important facts at the beginning of each *surah*, as well as those who merely present the *surah*’s title without adding any other information. For instance, *mushaf al-Amiry*, a popular Cairo *mushaf*, presents:

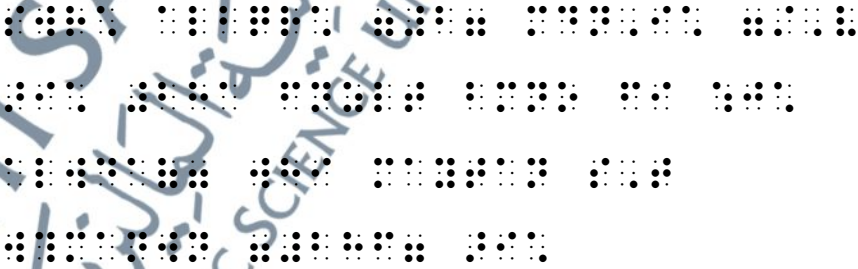
1. Title of surah,
2. Location of *surah*’s revelation,
3. Total verses of the *surah*, and

4. The number of *surah* according to the composition of al-Quran.

The publisher of Quran Majeed *muṣḥaf* also adopts this format. This format, however, differs from that utilised in Mujamma' Malik Fahad's *muṣḥaf al-Madīnah*, which just includes the name of the *surah*.

The format for documenting the opening of a *surah* in PERTIS Braille Quran is nearly identical to that used in *muṣḥaf al-Amiriy*, which is by placing four pieces of information: the title of the *surah*, the place of where the *surah* was revealed, the number of verses contained in the *surah*, and the *surah* number according to al-Quran's composition order. All of this information is provided in Arabic as well. The following is an example of documentation for the opening of *surah al-Baqarah* in the *muṣḥaf* of the PERTIS Braille Quran:

Table 4.37: Documentation for the opening of *surah al-Baqarah* in the *muṣḥaf* of the PERTIS Braille Quran.

Original text in PERTIS Braille Quran	
Transcription	<p>سورة البقرة (2) مدنية (إلا آية 281 فنزلت بمعى فى حجة الوداع) وهى مائتان ست وثمانون (286) آية</p>

4.2.2.2.5 Numbering of verses, marking of *sajdah* verses and placement of *saktah*.

The knowledge of numbering Quranic verses is associated with the knowledge on the number of *surahs*, as well as their total verses, words and letters. The divisions of *juz* and *hizb* constitute the discussion within the circle of this knowledge.

The marking of verse numbers is not found in the original ‘*Uthmānī mushaf*, along with the documentation at the beginning of each *surah*, the division of *juz* and *hizb*. The sign that was first used to signal the conclusion of each verse is a triple point forming a triangle that is placed on each end of the sentence, according to records (Al-Dani, 2017; Sulaiman, 2006) The sign then evolved into a spherical shape, followed by the insertion of the verse number, which was further augmented by patterned decoration surrounding the number after a period of time (al-Hamad, 2018). To this day, printers and publishers of the al-Quran *mushaf*, like Mujamma’ Malik Fahad, employ the latter symbol.

The number of each Quranic verse is also written at the end of the verse in the PERTIS Braille Quran. The Braille code 2,3,5,6 will be used to indicate the end of each of these verses.

Furthermore, each verse in the Braille Quran’s *mushaf* is written in a single paragraph. In this manner, the next verse is not continued within the same line as the previous one. Even though there is still an empty space at the end of the previous verse, it will begin on a new line. In addition, each verse begins with a space of two Braille cells following the distance of the first word in the verse.

Placement of *sajdah* signs

The sign of *sajdah* is a reminder to prostrate to Allah that is placed at the end of a Quranic verse. The symbol employed for this purpose in the *muṣḥaf al-Madīnah* is a dome sign placed at the end of the particular verse before the verse number. In addition, there is a horizontal straight line on the word in the verse that denotes *sajdah*.

The PERTIS Braille Quran also adopts *sajdah* sign. In contrast to the *muṣḥaf al-Madīnah*, there is no particular indication for this recitation in the Braille Quran. The PERTIS Braille Quran uses the marking approach of placing the word *sajdah* inscribed in brackets at the end of the particular verse.

Based on the analysis on the *muṣḥaf* text of the Braille Quran, the researcher noted that the sign for the verse bearing the instruction of *Sujud Tilāwah* in the PERTIS Braille Quran is highly limited and inconsistent with the typical *Muṣḥaf al-Madīnah*. There are only four verses in the *muṣḥaf* of the Braille Quran that are indicated as *Sujud Tilāwah*. Two of the verses have the code 2,3,5,6 *sin*, whereas the other two have the code 2,3,5,6 *sin, jim, dal, ha*. The verses are as follows:

1. Verse 206 of *surah al-A'raf* (marked with code 2,3,5,6 'ain, sin).
2. Verse 15 of *surah al-Ra'du*, (marked with code 2,3,5,6, sin).
3. Verse 49 of *surah al-Nahl* (marked in verse 50 with code 2,3,5,6 'ain, sin, jim, dal, ha).
4. Verse 58 of *surah Maryam* (marked with code 2,3,5,6 sin, jim, dal, ha).

Prof. Wahbah al-Zuhayli (1999) highlights 14 places of the *sajdah* verses in al-Quran according to the *Shafi'i* school, which are:

1. Verse 206 of *surah al-A'raf*,
2. Verse 15 of *surah al-Ra'd*,

3. Verse 49 of *surah al-Nahl* (with dome signage at the end of verse 50),
4. Verse 107 of *surah al-Isra* (with dome signage at the end of verse 109),
5. Verse 58 of *surah Maryam*,
6. Verse 18 of *surah al-Haj*,
7. Verse 77 of *surah al-Haj*,
8. Verse 60 of *surah al-Furqan*,
9. Verse 25 of *surah al-Naml* (with dome signage at the end of verse 26),
10. Verse 15 of *surah al-Sajdah*,
11. Verse 24 of *surah Şad*,
12. Verse 37 of *surah Fussilat* (with dome signage at the end of verse 38),
13. Verse 62 of *surah al-Najm*,
14. Verse 21 of *surah al-Insyiqaq*, and
15. Verse 19 of *surah al-'Alaq*.

All fourteen places are identified in the *muşhaf al-Madīnah* by the marking of the *sajdah*, which is done by placing a horizontal line on the *sajdah* word and the dome sign at the end of the verse connected to *sajdah*. However, there are 10 locations in the *muşhaf* of the Braille Quran that should be marked with the *sajdah* sign but are not. The sign of *sajdah* is not placed on the 15th verse of *surah al-Sajdah* (Braille Quran: volume 5, page 25).

Placement of *saktah* signs

The *saktah* sign is a tiny *sin* letter placed on a word in the *muşhaf al-Madīnah*. It demonstrates the necessity to pause at the word without breathing before moving on to the next line with the same breath (Aiman, 2020).

In the PERTIS Braille Quran, the marking method used for the recitation of the *saktah* is to place the word *saktah* in a bracket after the relevant word.

From the *riwayat* of *Hafs* of al-Syātibiyyah line, four places that are compulsory for *saktah* are outlined (al-Syatibiy, 2020; Sayyid Lashin & Khalid, 2013; Aiman, 2020). The places are as follows:

1. Verse 1 of *surah al-Kahf*,
2. Verse 52 of *surah Yasin*,
3. Verse 27 of *surah al-Qiamah*, and
4. Verse 14 of *surah al-Mutaffifin*.

Other than the four places mentioned above, there is another place of *saktah* in the *muṣḥaf al-Madīnah*, which is in the twenty-eighth verse (28) of *surah al-Hāqqah*.

Based on an analysis of the Braille Quran's *muṣḥaf* text, the researcher discovered that the places where the marking is placed to be read with the *saktah* correspond to the places of *saktah* found in the *muṣḥaf al-Madīnah*, which are in five places as follows:

1. Verse 1 of *surah al-Kahf*,
2. Verse 52 of *surah Yasin*,
3. Verse 28 of *surah al-Hāqqah*,
4. Verse 27 of *surah al-Qiamah*, and
5. Verse 14 of *surah al-Mutaffifin*.

4.3 The Design of the Coordination Between Texts of PERTIS Braille Quran with *Muṣḥaf al-Madīnah*

In the last section, the researcher has previously answered the research questions in the needs analysis stage by performing research on the writing method of *Hijaiyyah* letters (*rasm*) and punctuation marks (*ḍabt*) used in the current Braille Quran. The researcher uncovered various forms and aspects of writing that serve as patterns in the text of the Braille Quran based on the investigation.

The researcher initially created a list of aspects of inconsistencies observed in the Braille Quran writing system in order to address the next study question, which is about the design of coordination between the Braille Quran text and Mujamma' Malik Fahd's standard al-Quran *muṣḥaf* text. The text of *muṣḥaf al-Madīnah* was then employed as a reference point for coordination between the two *muṣḥafs*. The priority accorded to the text of the *muṣḥaf al-Madīnah* with the Mujamma' Malik Fahd's standard as the reference text is due to the *muṣḥaf*'s gained recognition. If there is intricacy in the text of the *muṣḥaf* to be altered, the reader's ability to use their sense of touch is taken into account.

Based on the findings of the analysis on the text of the Braille Quran, it can be concluded that the Braille Quran published by PERTIS does not fully cover *Rasm 'Uthmānī*'s writing system in terms of *hijaiyyah* letters application, and that there is a use of *ḍabt* that is not consistent with the *ḍabt* used in the *muṣḥaf* published by Mujamma' Malik Fahd.

Hence, during this phase of the study, the researcher devised a guideline based on the division of *rasm* and *ḍabt* elements for the goal of coordinating the two *muṣḥaf*'s texts.

4.3.1 Coordination on *Rasm* Element

The *rasm* element is pertaining the *hijaiyyah* letters and how they are ordered in the writing of each Quranic word. There were twenty-eight types of letters employed in the original text of the Quran *muṣḥaf*. Some of these letters serve dual purposes, such as the letter *alif*, which serves as a *madd* letter and the base of the *hamzah* letter. The same principle is applied to the *waw* and *ya* letters, which also serve as the base for the *hamzah* letter. Apart from its link to the letter *hamzah*, the form of the letter *ya* is also used as *alif maqṣūrah*. When the letter *ha* is at the end of a sentence, it serves two purposes. Apart from serving as its original function as a letter, it also represents the letter *ta* (*ta marbūtah*) in the *waṣl* recitation for specific words. The total of all the letters that exist, when calculated from a function standpoint, is thirty-six letters.

According to the World Braille Usage (third edition, 2013), there are 37 Braille codes designed to represent Arabic letters and their accompanying symbols (ligatures). The codes are as displayed in the figure below:

Arabic

Notes: The Conference of Developing and Unifying Arabic Braille Characters met in Saudi Arabia in October 2002. There has been confirmation from several countries that they are using this unified code, and other countries are not.

Primary language transcribed: Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, Yemen

Secondary language transcribed: Indonesia, Iran, Israel, Malaysia, Pakistan

Alphabet: Unified Arabic (Qatar, United Arab Emirates)

ا	alef	a	(1)	⠠	ض	dad	d	(1246)	⠠
ب	beh	b	(12)	⠠	ط	tah	t	(23456)	⠠
ت	teh	t	(2345)	⠠	ظ	zah	z	(123456)	⠠
ث	theh	th	(1456)	⠠	ع	ain	·	(12356)	⠠
ج	jeem	j	(245)	⠠	غ	ghain	gh	(126)	⠠
ح	hah	h	(156)	⠠	ف	feh	f	(124)	⠠
خ	khah	kh	(1346)	⠠	ق	qaf	q	(12345)	⠠
د	dal	d	(145)	⠠	ك	kaf	k	(13)	⠠
ذ	thal	dh	(2346)	⠠	ل	lam	l	(123)	⠠
ر	reh	r	(1235)	⠠	م	meem	m	(134)	⠠
ز	zain	z	(1356)	⠠	ن	noon	n	(1345)	⠠
س	seen	s	(234)	⠠	ه	heh	h	(125)	⠠
ش	sheen	sh	(146)	⠠	و	waw	w	(2456)	⠠
ص	sad	s	(12346)	⠠	ي	yeh	y	(24)	⠠

Ligatures

لا	La	(1236)	⠠	إ	E	(46)	⠠	ؤ	Waw	(1256)	⠠
ى	-	(135)	⠠	أ	Aa	(345)	⠠	ئ	ya	(13456)	⠠
أ	A	(34)	⠠	ء	a	(3)	⠠	ة	-	(16)	⠠

Figure 4.4: List of Braille codes for *Hijaiyyah* letters taken from the World Braille Usage (third edition, 2013), page 166.

Referring to the above figure, the number of letters in the World Braille Usage list expanded by one from the list of letters used in the text of the *muṣḥaf al-Madīnah* because there is the letter $\bar{ا}$ (*alif mamdūdah*) that indicates a mix of *hamzah fathah* and *alif*. This letter was also discovered in the PERTIS Braille Quran, which is represented by dots 3,4,5 in Braille code (item number 34 in the table below). The letter $\bar{ا}$ (*alif mamdūdah*) was observed to have been used in the Quran Majeed published by India,

however, it is not used in the Quran published by Mujamma' Malik Fahd and its alternative is written by separating the *hamzah fathah* with the letter *alif* after it. Consequently, the use of code 3,4,5, which symbolises the letter *alif mamdudah*, should be discontinued for the sake of coordination. As a result, code 3,4,5 can be used to represent other more important signs, particularly in the *dabt* category. The letters used in writing the PERTIS Braille Quran text are listed below:

Table 4.40: Letters used in writing the PERTIS Braille Quran text and their Braille codes.

No.	Braille Codes	Letters Represented
1.	⠠	ا
2.	⠡	ب
3.	⠢	ت
4.	⠣	ث
5.	⠤	ج
6.	⠥	ح
7.	⠦	خ
8.	⠧	د
9.	⠨	ذ
10.	⠩	ر
11.	⠪	ز

12.	○● ●○ ●○	س
13.	●● ○○ ○○	ش
14.	●● ●○ ●●	ص
15.	●● ●○ ○○	ض
16.	○○ ●● ●●	ط
17.	●● ●● ●●	ظ
18.	●○ ●● ●●	ع
19.	●○ ●○ ○○	غ
20.	●● ●○ ○○	ف
21.	●● ●● ○○	ق
22.	●○ ○○ ●○	ك
23.	●○ ●○ ●○	ل
24.	●● ○○ ●○	م
25.	●● ○○ ●○	ن
26.	●○ ●● ●○	و
27.	●○ ●● ○○	هـ
28.	●○ ●○ ●●	لا
29.	○○ ○○ ●○	ء
30.	●○ ●○ ○○	ي

31.	⠠	أ
32.	⠠	ؤ
33.	⠠	ئ
34.	⠠	آ
35.	⠠	ى
36.	⠠	ة

According to the above list, out of the thirty-seven letters utilised in Braille Quran released by PERTIS, there is only one letter not adopted in the writing. It is the letter ء (letter *alif* with *hamzah* underneath it) which is represented by the Braille code 4,6.

Based on the previous information, a guidance for aligning the Mujamma' Malik Fahd (*Rasm 'Uthmānī*) version of the *muṣḥaf al-Madīnah* with the Braille Quran in terms of the use of letters and the manner of combining the letters to make the Quran's words should be placed.

As a basic guideline for coordinating the Braille Quran text with the *muṣḥaf al-Madīnah*, the writing of the words in the Braille Quran text that are not in accordance with their spelling according to the technique of writing the words found in the *muṣḥaf al-Madīnah*, should be changed according to the features of *Rasm 'Uthmānī*, which is by acknowledging the aspects of *al-ḥadhf*, *al-ziyādah*, *al-ibdal*, *al-hamz* and *al-faṣl wa al-waṣl*, except in certain cases where the accuracy of Braille readers might be compromised.

Examples for each category of *Rasm ‘Uthmānī* features:

1. *al-Ḥadhf*

a. *Ḥadhf alif*. Example of its application on words:

Table 4.41: Coordination of *ḥadhf alif* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	
Arabic transcription	وَالصّٰفّٰتِ
<i>Muṣḥaf al-Madīnah</i> text	وَالصّفّٰتِ
Braille transcription	

b. *Ḥadhf ya*. Example of its application on words:

Table 4.42: Coordination of *ḥadhf ya* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	
Arabic transcription	التّٰيِّبِیْنَ
<i>Muṣḥaf al-Madīnah</i> text	التّٰيِّبِیْنَ
Braille transcription	

c. *Ḥadhf waw*. Example of its application on words:

Table 4.43: Coordination of *ḥadhf waw* between the texts of PERTIS Braille Quran with *mushaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	داوود
<i>Mushaf al-Madīnah</i> text	داوود
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠

2. *al-Ziyādah*

a. *Alif*. Example of its application on words:

Table 4.44: Coordination of *ziyādah alif* between PERTIS Braille Quran text with *mushaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	لشئ
<i>Mushaf al-Madīnah</i> text	لشئ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠

b. *Ziyādah ya*. Example of its application on words:

Table 4.45: Coordination of *ziyādah ya* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠏⠃⠠⠚⠁⠒⠤⠄⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	يَا أَيُّدِ
<i>Muṣḥaf al-Madīnah</i> text	يَا أَيُّدِ
Braille transcription	⠠⠏⠃⠠⠚⠁⠒⠤⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

c. *Ziyādah waw*. Example of its application on words:

Table 4.46: Coordination of *ziyādah waw* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠏⠃⠠⠚⠁⠒⠤⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	سَأُورِيكُمْ
<i>Muṣḥaf al-Madīnah</i> text	سَأُورِيكُمْ
Braille transcription	⠠⠏⠃⠠⠚⠁⠒⠤⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

d. *Ziyādah nun*. Example of its application on words:

Table 4.47: Coordination of *ziyādah nūn* between the texts of PERTIS Braille Quran with *mushaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠
Arabic transcription	نُجِي
<i>Mushaf al-Madīnah</i> text	نُجِي
Braille transcription	⠠⠠⠠⠠⠠⠠

3. *al-Ibdal*

a. The letter *waw* that substitutes *alif*.

There are eight words printed in the *mushaf al-Madīnah (Rasm ‘Uthmānī)* using the *ibdal alif* to *waw* method should be removed from the original guide since the *waw* letter that substitutes *alif* in these words is particularly confusing to Braille users. This is because the recitation technique differs across users of the senses of vision and touch. Users with visual can recognise a word as a whole in a single view that contains all of the letters on the word, whereas touch-based users must touch each letter separately. This confuses the user’s sense of touch with the existing *waw* letter, and they will pronounce it based on the line of the tiny *alif* of the *waw* letter. To avoid confusion with the Braille writing reader, these words must be spelt without the letter *waw*. These words are:

verse 245 and *surah al-A'raf* verse 69, respectively. Due to the constraints of the Braille writing system, which prevents lowercase letters from being written on top of the original letters as used in the *muṣḥaf al-Madīnah* text, one of the two letters must be chosen for inclusion in the writing. The researcher contends that sustaining a proper reading is more crucial than maintaining the *rasm* in this case. As a result, the *sod* letter that is read in these two locations with the sound of the letter *sin* must be written entirely with the letter *sin*. The following are the applications:

Table 4.50: Coordination for the letter *ṣad* that is recited with *sin* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah* in *surah al-Baqarah* verse 245:

PERTIS Braille Quran text	
Arabic transcription	
<i>Muṣḥaf al-Madīnah</i> text	
Braille transcription	

Table 4.51: Coordination for the letter *ṣad* that is recited with *sin* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah* in *surah al-A'raf* verse 69:

PERTIS Braille Quran text	
Arabic transcription	

<i>Mushaf al-Madinah</i> text	بَصَّطَةٌ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠

When the letter *sin* is placed beneath the letter *şad*, the situation changes. Reading with the *şad* letter is preferable to reading with the letter *sin* in this scenario, so the *şad* letter is maintained because it is *Rasm cUthmānī*.

4. *al-Hamz*

- a. For the letter *hamzah* located in the initial of the word, it should be represented in Braille code 3,4 if it is in *fathah* or *dammah*.

The instance where the letter *hamzah* is in *fathah*:

Table 4.52: Coordination for the letter *hamzah fathah* between the texts of PERTIS

Braille Quran with <i>mushaf al-Madinah</i> .	
PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	أَمْرًا
<i>Mushaf al-Madinah</i> text	أَمْرًا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠

The instance where the letter *hamzah* is in *ḍammah*:

Table 4.53: Coordination for the letter *hamzah ḍammah* between the texts of PERTIS

Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	أُنزِلَ
<i>Muṣḥaf al-Madīnah</i> text	أُنزِلَ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

- b. For the letter *hamzah* located in the initial of the word, it should be represented in Braille code 4,6 if it is in *kasrah*.

The instance where the letter *hamzah* is in *kasrah*:

Table 4.54: Coordination for the letter *hamzah kasrah* between the texts of PERTIS



Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	إِيَّاكَ
<i>Muṣḥaf al-Madīnah</i> text	إِيَّاكَ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

- c. For the letter *hamzah* that followed after a letter with *sukoon*, it should be transcribed with Braille code 3, which denotes the letter *hamzah* without *alif* or *waw* or *ya*.

The instance where the letter *hamzah* is pronounced and followed after a letter with *sukoon*:


Table 4.55: Coordination for the pronounced letter *hamzah* that followed after a letter with *sukoon* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	
Arabic transcription	مَسْئَلَا
<i>Muṣḥaf al-Madīnah</i> text	مَسْئَلَا
Braille transcription	

5. *al-Faṣl wa al-Waṣl*

Instance of application:

Table 4.56: Coordination for *al-faṣl wa al-waṣl* between the texts of PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	
Arabic transcription	يَا أَيُّهَا
<i>Muṣḥaf al-Madīnah</i> text	يَبْنُوم

Braille transcription



4.3.2 Coordination on *Dabṭ* Element

The list of Braille codes for *dabṭ* element presently employed in the PERTIS Braille Quran text is partly taken from World Braille Usage (third edition, 2013), as shown in the figure below:

Diacritical Marks: Written after the letter, except the Shadda which is before the letter											
◌̣	Fatha	(2)	::	◌̣◌̣	Fathatan	(23)	::	◌̣◌̣◌̣	Shadda	(6)	::
◌̣◌̣	Kasra	(15)	::	◌̣◌̣◌̣	Kasratan	(35)	::	◌̣◌̣◌̣◌̣	Sukun	(25)	::
◌̣◌̣◌̣	Damma	(136)	::	◌̣◌̣◌̣◌̣	Dammatan	(26)	::				

Figure 4.5: List of Braille codes for *dabṭ* element from the book World Braille Usage (third edition, 2013) page 167.

According to the diagram above, there are eight different types of *dabṭ*, each of which is represented by a different Braille code. The *dabṭ* signs are *ḍammah*, *fathah*, *kasrah*, *tanween* for *ḍammah* (*ḍammatain*), *tanween* for *fathah* (*fathatain*), *tanween* for *kasrah* (*kasratain*), *sukoon* and *shaddah*. Apart from the indicators listed above, the PERTIS Braille Quran text contains seven additional signs, which are *madd far'i* (code 2,4,6), small *alif* (code 4), tiny *waw* (code 3,4,6), tiny *ya* (code 4,5), as well as markers for *waqf*, *sajdah* and *saktah*.

A comparative study of the texts of the PERTIS Braille Quran and the text of the *al-Madīnah* inferred that the *dabṭ* element employed falls into two categories. The *dabṭ* element present in both *mushāfs* falls within the first category. However, the majority of them are employed differently across the two. The *dabṭ* element that is not contained

in the Braille Quran but is present in the *muṣḥaf al-Madīnah*, falls under the second category. The researcher organised the investigation into two components in this coordination study, namely:

1. Inconsistent application of markings in both *muṣḥafs*.
2. The signs contained in the *muṣḥaf al-Madīnah* but not in the Braille Quran.

The list of *dabt* with inconsistent application in both *muṣḥafs* are:

1. *Fathah* sign
2. *Ḍammah* sign
3. *Kasrah* sign
4. *Sukoon* sign
5. *Syaddah* sign
6. *Madd* sign that is over 2 *ḥarakāt*
7. Tiny *alif* sign
8. Tiny *waw* sign
9. Tiny *ya* sign
10. *Waqf* signs

The following is a list of *dabt* components that are not adopted in the Braille Quran but appear in the *muṣḥaf al-Madīnah*:

1. Non-parallel *tanween*
2. *Ṣifr mustadīr*
3. *Ṣifr mustatīl*
4. *Tashīl* sign
5. *Imālah* sign

6. *Sajdah* sign
7. *Saktah* sign
8. *Iqlāb* sign
9. *Alif waṣl* sign

To realise the coordination between the texts of the Braille Quran and the *muṣḥaf al-Madīnah*, Braille codes for markings that are found in the latter that has not yet been used in the text of the Braille must be considered to be created. Braille codes for these markings must be chosen from a list of unused codes so that they do not conflict with codes for letters, signs, or any other code that already serves a purpose.

4.3.2.1 Fathah sign

In the text of the *muṣḥaf al-Madīnah*, the *fathah* sign is placed on each letter that is read *fathah*. The *fathah* sign is represented by a dot 2 Braille code in the Braille Quran text. The discrepancy between the *muṣḥaf al-Madīnah* and the Braille Quran regarding the *fathah* sign occurs when it is not applied in the Braille Quran if there are letters *alif*, small *alif*, or *alif maqṣūrah* that serve as *madd* letters following the letter in the *fathah*.

Furthermore, the *fathah* line is applied as a *ḥarakāt* on the second *lam* letter in the words **اللَّهُ** and **اللَّهُمَّ** anywhere in the *muṣḥaf al-Madīnah*. Meanwhile, in the Braille Quran, the second *lam* of the two words is noted with a tiny *alif* per its original *ḥarakāt*, which is two *ḥarakāt*.

Finally, on the issue of *fathah* sign, there are two scenarios that necessitate coordination between the Braille and *mushaf al-Madīnah*. To reconcile these *mushafs*, the *fathah* sign must be placed before:

1. Coordination on the placement of *fathah* before:

a. The letter *alif*

i. Example i:

Table 4.57: Coordination between the PERTIS Braille Quran with *mushaf al-Madīnah* on the placement of *fathah* before the letter *alif*.

PERTIS Braille Quran text	⠠⠠⠠
Arabic transcription	لا
<i>Mushaf al-Madīnah</i> text	لا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠

ii. Example ii:

Table 4.58: Coordination between the PERTIS Braille Quran with *mushaf al-Madīnah* on the placement of *fathah* before the letter *alif*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	يَشَاءَ
<i>Mushaf al-Madīnah</i> text	يَشَاءَ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

b. The small *alif*

Table 4.59: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *fathāh* before the small *alif*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	غِشْوَةٌ
<i>Muṣḥaf al-Madīnah</i> text	غِشْوَةٌ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

c. The letter *alif maqṣūrah*:

Table 4.60: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *fathāh* before the letter *alif maqṣūrah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	وَالضُّحَى
<i>Muṣḥaf al-Madīnah</i> text	وَالضُّحَى
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

2. Coordination on the placement of *fathah* that substitutes the small *alif* on the second *lam* of a word:

a. اللهُ

Table 4.61: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *fathah* before the word اللهُ.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	الله
<i>Muṣḥaf al-Madīnah</i> text	الله
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

b. اللهُمَّ

Table 4.62: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *fathah* before the word اللهُمَّ.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	اللهُمَّ
<i>Muṣḥaf al-Madīnah</i> text	اللهُمَّ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

4.3.2.2 *Ḍammah sign*

In the text of the *muṣḥaf al-Madīnah*, the *Ḍammah* sign is placed on each letter that is recited *Ḍammah*. The *Ḍammah* sign is represented by the Braille code dots 1,3,6 in the Braille Quran text.

The angle of inconsistency between the *muṣḥaf al-Madīnah* and the PERTIS Braille Quran is on the *Ḍammah* sign, which is not included in the PERTIS Braille Quran if there are letters *waw* or tiny *waw* that act as *madd* letters after the letter that is lined with *Ḍammah*.

Ultimately, in order for the PERTIS Braille Quran and the *muṣḥaf al-Madīnah* to be in sync, the *Ḍammah* sign must be placed before:

- a. The letter *waw*

Table 4.63: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *fathah* before the letter *waw*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠
Arabic transcription	قالوا
<i>Muṣḥaf al-Madīnah</i> text	قَالُوا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

b. The tiny *waw*

Table 4.64: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *fathah* before the tiny *waw*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠
Arabic transcription	لَهُ
<i>Muṣḥaf al-Madīnah</i> text	لَهُ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠

4.3.2.3 Kasrah sign

In the text of the *muṣḥaf al-Madīnah*, the *kasrah* sign is placed on each letter that is recited *kasrah*. The *kasrah* sign is represented by the Braille code dots 1,3,6 in the Braille Quran text. The angle of discrepancy with the conventional *muṣḥaf* is that the *kasrah* sign is not inserted in the PERTIS Braille Quran if the letter *ya*, which serves as a *madd* letter after the *kasrah* letter, is present.

The angle of inconsistency between the *muṣḥaf al-Madīnah* and the Braille Quran regarding the *kasrah* sign is it is not placed in the PERTIS Braille Quran if there is a letter *ya* or tiny *ya* that acts as a *madd* letter following the *kasrah* letter.

In order to reconcile between the *muṣḥaf al-Madīnah* and the PERTIS Braille Quran, ultimately, the *kasrah* sign must be inserted before:

a. The letter *ya*

Table 4.65: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *kasrah* before the letter *ya*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	العَالَمِينَ
<i>Muṣḥaf al-Madīnah</i> text	الْعَالَمِينَ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

b. The tiny *ya*

Table 4.66: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *kasrah* before the tiny *ya*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	يهـ
<i>Muṣḥaf al-Madīnah</i> text	يهـ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

4.3.2.4 Sukoon sign

The *sukoon* sign in the text of the *muṣḥaf al-Madīnah* is placed on each letter that the *sukoon* is recited as *izhār* only (Al-Marighni, 2020). The *sukoon* sign is represented by 2,5 dot Braille code in the PERTIS Braille Quran text. The point of inconsistency

between the *muṣḥaf al-Madīnah* and the PERTIS Braille Quran occurs when the sign is also placed on the letters that are read other than *izhār* in the Braille Quran.

In conclusion, the *sukoon* sign on letters that are recited other than *izhār* should be eliminated in order to match the PERTIS Braille Quran with the *muṣḥaf al-Madīnah*.

The following is a practical recommendation for coordinating *dabṭ* on the letter *mīm sākinah* that is followed by a *mīm* at the end of a word:

Table 4.67: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *dabṭ* on a *mīm sākinah* letter that is followed by a *mīm* in the end of a word.

PERTIS Braille Quran text	⠠⠍⠢⠣⠖⠎⠗⠤⠠⠍⠢⠣⠖⠎⠗⠤⠠⠍⠢⠣⠖⠎⠗⠤
Arabic transcription	لَهُمْ مِنْ قَرْنٍ
<i>Muṣḥaf al-Madīnah</i> text	لَهُمْ مِّنْ قَرْنٍ
Braille transcription	⠠⠍⠢⠣⠖⠎⠗⠤⠠⠍⠢⠣⠖⠎⠗⠤⠠⠍⠢⠣⠖⠎⠗⠤

For the coordination of *dabṭ* on the *nūn sākinah* that is followed by *lam (idgham)* at the end of a word, the practical recommendation is:

Table 4.68: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *dabṭ* on a *nūn sākinah* letter that is followed by a *lam* at the end of a word.

PERTIS Braille Quran text	⠏⠑⠏⠗⠑⠒⠗⠑⠗⠑⠒⠑⠗⠑⠒⠑⠗⠑⠒⠑
Arabic transcription	يَكُنْ لَهُ
<i>Muṣḥaf al-Madīnah</i> text	يَكُنْ لَهُ
Braille transcription	⠑⠏⠏⠗⠑⠒⠑⠗⠑⠒⠑⠗⠑⠒⠑⠗⠑⠒⠑

For the coordination of *ḍabt* on the *dal sākinah* that is followed by *ta* (*idgham*), the practical recommendation is:

Table 4.69: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *ḍabt* on a *dal sākinah* letter that is followed by *ta*.

PERTIS Braille Quran text	⠑⠃⠒⠑⠒⠑⠗⠑⠒⠑⠗⠑⠒⠑
Arabic transcription	عَبْدَتْكُمْ
<i>Muṣḥaf al-Madīnah</i> text	عَبْدَتْكُمْ
Braille transcription	⠑⠃⠒⠑⠒⠑⠗⠑⠒⠑⠗⠑⠒⠑

For the coordination of *ḍabt* on the *nūn sākinah* that is followed by *qaf* (*ikhfa'*), the practical recommendation is:

Table 4.70: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *ḍabt* on a *nūn sākinah* letter that is followed by *qaf*.

PERTIS Braille Quran text	⠑⠃⠒⠑⠒⠑⠗⠑⠒⠑⠗⠑⠒⠑
------------------------------	----------------

<i>Muṣḥaf al-Madīnah</i> text	مِنْ رَبِّكَ
Braille transcription	⠠⠍⠊⠨⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎

Examples of recommended practice on *dabṭ* coordination for *idghām bā* to *mīm* condition:

Table 4.76: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *dabṭ* for *idghām bā* to *mīm*.

PERTIS Braille Quran text	⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎
Arabic transcription	أَرْكَبُ مَعَنَا
<i>Muṣḥaf al-Madīnah</i> text	أَرْكَبُ مَعَنَا
Braille transcription	⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎⠠⠗⠃⠊⠕⠎

4.3.2.6 Tanween sign

Tanween was originally a *nūn sākinah* letter, which appeared at the end of a word in the category of nouns (*ism*), but it is no longer written in the letter *nun* (al-Dani, 2017; Sulaiman bin Najah, 2006, Ibn al-Siraj, 2016). Parallel *tanween* (*tarkīb*) and non-parallel *tanween* (*itbā'*) are the two forms of *tanween* signs found in the *muṣḥaf al-Madīnah*. Parallel *tanween* (*tarkīb*) is written in parallel and is used in the situation of *izhār* recitation as a condition to the distance of the pronunciation of *nūn sākinah* *makhraj* in the *tanween* of *izhār* letters. On the other hand, the non-parallel *tanween* (*itbā'*) is written unparallelled with the line that is furthest from the letter is slightly to

the front compared to the first line. The non-parallel *tanween* (*itbā'*) is used in the situations of *idgham* and *ikhfa'* recitation. It is written non-parallel, which technically the line representing the *tanween* incline towards the next letter as a sign of the close pronunciation of the letters practised on those rules (al-Dani, 2017; Sulaiman bin Najah, 2006, al-Tanasi, 2000).

In Braille, the *tanween* sign is integrated with the original sign with a single code, unlike in traditional Arabic text writing. This means that the *fathah* sign's code, dot 2, is not joined with other codes to make the *fathah* or *tanween* sign, but these two signs are still represented by the code with dots 2,3. The *tanween* sign, along with *fathah*, is represented by dots 2,3 of the Braille code in the Braille Quran. Braille code 2,6 represents the symbol of *tanween* with *ḍammah*. Meanwhile, Braille code 3,5 represents the symbol of *tanween* with *kasrah*.

Because only one form of *tanween* is utilised in the Braille Quran, there is an angle of inconsistency with the typical *mushaf*. This indicates that the Braille Quran's *tanween* sign does not satisfy the rule of *tajweed*, whether it is *izhār*, *ikhfa'*, or *idgham*. To put it another way, there is no distinction between parallel (*tarkīb*) and non-parallel (*itbā'*) *tanween*.

Furthermore, the *fathatain* sign found on any letter other than *ta marbūṭah* and *hamzah* that is not followed by the letter *alif* in the Braille Quran will be placed on/after *alif* and not on the letter in *tanween*, as is the case in the *mushaf al-Madīnah*. Although the placement of *tanween* on/after this *alif* is consistent with the school of *Maghāribah dabṭ* (Al-Idrisiy, 2009), it must follow the school of *Masyāriqah* for conformity with the *mushaf al-Madīnah*.

Therefore, this *madd far'ie* sign must be inserted on each letter recited with this rule in order to coordinate between the Braille Quran and the *muṣḥaf al-Madīnah*.

Recommended coordination practice:

a. *Madd wājib muttaṣil:*

Table 4.82: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *ḍabṭ* for *madd wājib muttaṣil*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	يَشَاءُ
<i>Muṣḥaf al-Madīnah</i> text	يَشَاءُ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠

b. *Madd jāiz munfaṣil:*

Table 4.83: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *ḍabṭ* for *madd jāiz munfaṣil*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	مَا أَمْرُهُ
<i>Muṣḥaf al-Madīnah</i> text	مَا أَمْرُهُ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

c. *Madd lāzim harfī:*

Table 4.84: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *ḍabṭ* for *madd lāzim harfī*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	ا-ل-م
<i>Muṣḥaf al-Madīnah</i> text	الم
Braille transcription	⠠⠠⠠⠠⠠⠠

d. *Madd lāzim kalimi:*

Table 4.85: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *ḍabṭ* for *madd lāzim kalimi*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	الضّالّين
<i>Muṣḥaf al-Madīnah</i> text	الضّالّين
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

4.3.2.8 Small alif sign


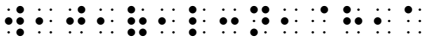
In the *muṣḥaf al-Madīnah*, the small *alif* sign is placed on the *fathah* letter that is recited with two *ḥarakāt*. The small *alif* sign is commonly used to replace the letter *alif*, which is being *ḥadhf* according to *Rasm ‘Uthmānī*’s writing features. This sign is represented by dot 4 Braille code in the Braille Quran. There is a variation in the use of small *alif* in the printing of sentences connected to the *ḥadhf* of *alif* since the Braille Quran is not perfectly aligned according to *Rasm ‘Uthmānī*.

Furthermore, the second *lam* letter in the word Allah is marked with the small *alif* in the text of the Braille Quran, but the second *lam* letter in the word is placed with the line *fathah* in the text of the *muṣḥaf al-Madīnah*.

Ultimately, the small *alif* sign is added to each letter recited in line with the rule to coordinate between the Braille Quran and the *al-Madīnah*.

Examples of recommended coordination practice of the small *alif* in the middle of a word:

Table 4.86: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *dabt* for the small *alif* in the middle of a word.

PERTIS Braille Quran text	
Arabic transcription	وَجَعَلْنَاهَا
<i>Muṣḥaf al-Madīnah</i> text	وَجَعَلْنَهَا
Braille transcription	

Examples of recommended coordination practice of the small *alif* at the end of a word:

Table 4.87: Coordination between the PERTIS Braille Quran with *mushaf al-Madīnah* on the placement of *dabʿ* for the small *alif* at the end of a word.

PERTIS Braille Quran text	⠏⠠⠷⠁⠗⠏⠎⠊⠁⠏
Arabic transcription	وَالضُّحَى
<i>Mushaf al-Madīnah</i> text	وَالضُّحَى
Braille transcription	⠏⠠⠷⠁⠗⠐⠏⠎⠊⠁⠏

4.3.2.9 Tiny waw sign

In the *mushaf al-Madīnah*, the tiny *waw* sign appears after the letter *waw* that is recited *ḍammah* with two *ḥarakāt*. This sign is also placed after the *damir* letter, which should be recited with two *ḥarakāt*. This tiny *waw* sign is usually placed on the *madd ṣilah* in most recitation scenarios. This sign is sometimes used in place of the letter *waw*, which is being *ḥadhf* as per to *Rasm ʿUthmānī*’s writing features (al-Hamad, 2019). This sign is represented by a Braille code of dots 3,4,6 in the Braille Quran. There is a variation in the usage of the tiny *waw* sign in the writing of words connected to the *ḥadhf* of *waw* since the Braille Quran is not properly aligned according to *Rasm ʿUthmānī*. This is specified in the *ḥadhf* of *waw* section’s coordination of the *rasm* element.

Examples of recommended coordination practice of the tiny *waw* in the middle of a word:

Table 4.88: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *dabt* for the tiny *waw* in the middle of a word.

PERTIS Braille Quran text	⠠⠗⠠⠠⠠⠠⠠
Arabic transcription	داوود
<i>Muṣḥaf al-Madīnah</i> text	دَاوُودَ
Braille transcription	⠠⠗⠠⠠⠠⠠⠠⠠

Examples of recommended coordination practice of the tiny *waw* at the end of a word:

Table 4.89: Coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* on the placement of *dabt* for the tiny *waw* at the end of a word.

PERTIS Braille Quran text	⠠⠕⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	لَهُ يَحْيَى
<i>Muṣḥaf al-Madīnah</i> text	لَهُو يَحْيَى
Braille transcription	⠠⠕⠠⠠⠠⠠⠠⠠⠠⠠⠠

4.3.2.10 Tiny *ya* sign

In the *muṣḥaf al-Madīnah*, the tiny *ya* sign is placed on the letters that are recited as *kasrah* with two *ḥarakāt*. This tiny *ya* sign is usually placed in the recitation of *madd ṣilah* or after the letter *ha* in the *hādhihi* words. This sign is sometimes used in place of

Muṣḥaf al-Madīnah text	Braille Version
السُّفَهَااءُ ٱلْأَآ	

e. *Waqf ta'ānuq*

Table 4.97: Practice of coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *waqf ta'ānuq* sign.

Muṣḥaf al-Madīnah text	Braille Version
رَيْبَ فِيهِ	

Once the aspect of the use of signs for these *waqf* places has been coordinated, the placement locations must also be coordinated.

Finally, to coordinate the Braille Quran and the *al-Madīnah*, the signs of *waqf* must be coordinated from two angles, which are:

1. The use of *waqf* signs in accordance with the *muṣḥaf al-Madīnah*.
2. Placement of *waqf* places in accordance with the *muṣḥaf al-Madīnah*.

4.3.2.12 Sajdah sign

The *sajdah* sign is a reminder to prostrate before Allah that is inserted at the end of a verse in al-Quran. The dome sign is employed for this reason in the *muṣḥaf al-Madīnah*, and it is inserted at the conclusion of the appropriate verse, before the verse number. A

straight horizontal line is also placed above the word in the verse that contains the notion of *sajdah*.

This sign is also applied in the PERTIS Braille Quran. Unlike the *muṣḥaf al-Madīnah*, no special markers are utilised in the Braille Quran for this recitation. The marking method in the PERTIS Braille Quran is divided into two categories. The first method involves placing the code 2,3,5,6 and the letter *sin* at the end of the relevant verse, while the second method involves placing the code 2,3,5,6 and the word *sajdah* after it (*sin, jim, dal, ha*). The researcher believes that the marking for *sajdah* verses in the Braille Quran is still significant and should be kept if it is done in the form of words in parenthesis and placed at the end of the verse. This alleviates the need for Braille users to memorise new special codes. The word *sajdah*, on the other hand, must be spelt in the correct Arabic script, with the characters *sin, jim, dal*, and *ta marbūṭah*. This word must also be placed in the entire parenthesis at the beginning and end of the *sajdah* sentence, indicated by code 2,3,5,6. In Saudi Arabia, Indonesia, Turkey, and Morocco, this writing method is utilised for Braille Quran.

Shorter code placement, however, can be considered as long as it does not cause an issue for the reader. The letter *sin* is an apt representation of the word *sajdah* (code 2,3,4). To distinguish between *rasm* and *dabī*, the letter *sin* is placed between the opening and closing brackets (code 2,3,4,5). The usage of this basic code can minimise the amount of space utilised in Braille text, albeit only a little. Furthermore, the usage of basic codes for different *dabī* forms makes it more uniform and standardised. Examples of coordination practice are as follows. Verses marked with *sajdah* sign in the PERTIS Braille Quran :

Table 4.98: Practice of coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *sajdah* sign.

PERTIS Braille Quran text	
Arabic transcription	سُجِّدًا وَبُكِّيَّةً ﴿٥٨﴾
<i>Muṣḥaf al-Madīnah</i> text	﴿٥٨﴾ سُجِّدًا وَبُكِّيَّةً ﴿٥٨﴾
Braille transcription 1	
Braille transcription 2	

Verses without the *sajdah* sign in the PERTIS Braille Quran:

Table 4.99: Practice of coordination between the PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *sajdah* sign.

PERTIS Braille Quran text	
Arabic transcription	﴿١٩﴾ وَأَسْجُدْ وَاقْتَرِبْ
<i>Muṣḥaf al-Madīnah</i> text	﴿١٩﴾ وَأَسْجُدْ وَاقْتَرِبْ ﴿١٩﴾
Braille transcription 1	

Braille transcription	⠠⠋⠠⠃⠠⠎⠠⠞⠠⠑⠠⠎⠠⠑⠠⠃⠠⠓⠠⠑⠠⠔
2	⠠⠋⠠⠃⠠⠎⠠⠞⠠⠑⠠⠎⠠⠑⠠⠃⠠⠓⠠⠑⠠⠔

To conclude, the marking for the verse of sajdah must be maintained or slightly revised and placed at the end of the relevant verse in order to coordinate the Braille Quran with the *al-Madīnah*.

4.3.2.13 Saktah sign

The *saktah* sign is a little *sin* letter placed on top of a sentence in the *mushaf al-Madīnah*. It denotes the necessity to take a pause while reading the verse and then continue reading the following verse with the same breath (Aiman, 2020).

In the PERTIS Braille Quran, to indicate *saktah* recitation, the *saktah* word is included in parenthesis after the associated word. The researcher believes that the *saktah* marker is still useful and should be kept in the form of words in parenthesis following the associated word since it saves the Braille reader from having to memorise a new special code if one is created.

However, if it is not a burden to the user, a simpler sign may be preferable because it saves space. The letter *sin* (code 2,3,4) can be used to symbolise the word *saktah*, and it should be inserted between code 3,6 without any space between them and the word with *saktah* recitation. The positioning of code 3,6 is to distinguish it from the previous word while also distinguishing it from the *sajdah* marker proposed earlier by placing the letter *sin* in parentheses. Furthermore, in the *mushaf al-Madīnah*, the *saktah*

4.3.2.14 Signs Applied in the *Muṣḥaf al-Madīnah* but Not in the Braille Quran or Need a More Relevant Substitution

From the researcher's analysis of the text of the two *muṣḥafs*, there are 10 signs that are applied in the *muṣḥaf al-Madīnah* but have not yet been applied in the Braille version. These signs do not yet exist in Braille code in practice. Most of these unapplied indicators have a very important role (*darūrī*), and without them, a reader is more prone to commit reading errors like adding *ḥarakāt*, removing *ḥarakāt*, or failing to apply a special form of recitation at all. For instance, the sign of *ṣifr mustadīr*, which serves to indicate the letter 'illah (*alif* or *waw* or *ya*) being marked with the sign is not supposed to be recited in *waṣl* or *waqf*.

The absence of such a marker will cause readers, particularly non-Arabic speakers, to be perplexed and misinterpret the letter as a *madd* letter. These types of errors are classified as significant errors (*jalī*). The same is the case with the need to place the *imālah* sign on the letters that need to be recited in *imālah*. There is no unique symbol for the recitation of *imālah* in the Braille Quran, but the rule of the recitation is documented in the form of the word *imālah* written in parenthesis following the word. This causes readers to get perplexed, as they are unable to determine which letter is truly in the word that needs to be recited in *imālah*. The same can be said of the *ishmām* situation. However, among all the signs that are missing from this Braille Quran's text, there are others that are not as important to generate, such as the *hamzah waṣl* sign. It was discovered that the absence of the *hamzah waṣl* sign did not result in a recitation error. The placement of the sign *hamzah waṣl* can be described as non-critical or *tahsīni*.

New signs must be produced to represent signs that do not yet exist in order to coordinate this circumstance. According to the revisions, ten Braille dot combinations

out of 63 variations can still be utilised to register new codes for these non-existent signs. The following are the 10 combinations of Braille dots that have yet to be used:

Table 4.101: Ten combinations of Braille dots that have yet to be used in the PERTIS Braille Quran.

Unused Braille codes	Dots positions
⠄	2,3,6
⠆	2,5,6
⠇	3,5,6
⠊	1,4
⠋	1,2,3,4
⠌	1,2,4,5,6
⠍	1,2,4,5
⠎	4,5,6
⠏	5,6
⠑	5

The researcher attempted to organise the Braille codes in the table above in order of importance in terms of touch sensory-based utilisation. When Braille text readers who utilise tactile senses use the last three codes, they may become confused. This is due to the fact that the codes, in terms of point arrangement, mimic codes that represent existent letters or signs. Code 4,5,6, for example, is quite close to code 1,2,3 which represents the letter *lam*. Code 5,6 is nearly identical to code 2,3, which indicates the *fathatain* sign. While code 5 is nearly identical to code 2, which signifies the indication of *fathah*.

4.3.2.15 Non-Parallel *Tanween* (*Itbā'*)

Non-parallel *tanween* (*itbā'*) is written unparallelled with the line that is furthest from the letter is slightly to the front compared to the first line. This sign is applied in the situations of *idgham* and *ikhfa'* recitations. It is written non-parallel, as a sign of the close pronunciation of the letters practised on those rules (al-Tanasi, 2000; Sulaiman bin Najah, 2006; Abdul Rahim, 2018, Aiman, 2020).

Non-parallel *tanween* can be found in the *muṣḥaf al-Madīnah* in three *ḥarakāt*, which are *fathatain*, *ḍammatain* and *kasratain*. To actualise the coordination between the two texts in concern, three new Braille codes have to be generated.

The code with dots 2,3,6 is the best option among the nine remaining Braille codes for representing the non-parallel *fathatain* sign. This is due to the fact that it is the code that is most similar to the parallel *fathatain* code (dots 2,3).

The code with dots 2,5,6 is the best code to represent the non-parallel *ḍammatain* sign. It is also the code that is most similar to the parallel *ḍammatain* code (dots 2,6).

The last sign of non-parallel *tanween* (*itbā'*) is *kasratain*. The code with dots 3,5,6 is the one closest to the parallel *kasratain* code (dots 3,5) among the remaining codes. The proximity factor of this code form will aid users of the Braille Quran in more quickly recognising and remembering the new code. The following is a table of existing Braille codes for parallel *tanween*, followed by a table of suggested Braille codes for non-parallel *tanween* (*itbā'*), *fathatain*, *ḍammatain*, and *kasratain*:

a. *Tanween tarkīb* (parallel) - used presently:

- *Fathatain* = dots (2,3).
- *Kasratain* = dots (3,5).

- *Ḍammatain* = dots (2,6).

Table 4.102: Braille codes for parallel *tanween* presently used in the PERTIS Braille

Quran.	
<i>Tanween tarkīb</i> (parallel)	Braille Version
=	⠠⠠
=	⠠⠠
=	⠠⠠

b. *Tanween itbā'* (non-parallel) - recommendations:

- *Fatḥatain* = dots (2,3,6).
- *Kasratain* = dots (3,5,6).
- *Ḍammatain* = dots (2,5,6).

Table 4.103: Recommended Braille codes for non-parallel *tanween* (*itbā'*) used in the PERTIS Braille Quran.

<i>Tanween itbā'</i>	Braille Version
=	⠠⠠
=	⠠⠠
=	⠠⠠

Example of coordination practice for *tanween tatabu'*:

a. *Fatḥatain*

Table 4.104: Coordination for *tanween tatabu'* *fathah* between PERTIS Braille Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	أَلِيْمًا
<i>Muṣḥaf al-Madīnah</i> text	أَلِيْمًا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

b. *Ḍammatain*

Table 4.105: Coordination for *tanween tatabu' dammah* between PERTIS Braille

Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	أَجَاكٍ
<i>Muṣḥaf al-Madīnah</i> text	أَجَاكٍ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

c. *Kasratāin*

Table 4.106: Coordination for *tanween tatabu' kasrah* between PERTIS Braille

Quran with *muṣḥaf al-Madīnah*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	شَيْءٍ
<i>Muṣḥaf al-Madīnah</i> text	شَيْءٍ

Braille transcription	⠠⠏⠞⠢⠢⠰⠠⠆⠠⠩⠠⠥⠠⠦⠠⠥⠠⠨⠠⠭⠠⠤⠠⠩⠠⠥⠠⠦⠠⠥⠠⠨
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Finally, in order to coordinate the Braille Quran with *muṣḥaf al-Madīnah*, Braille Quran manuscript with the Madinah manuscript, a code for *tanween itbā'* (non-parallel) should be generated and ideally, it has the proper codes to be applied.

4.3.2.16 Iqlab sign

In the text of the *muṣḥaf al-Madīnah*, the *iqlāb* sign is a tiny *mīm* letter put either on top of the *nūn sākinah* letter followed by the letter *ba*, or as a *tanween* when the first letter in the next word is the letter *ba* (Sulaiman bin Najah, 2006; Mohd Rahim, 2018; Aiman, 2020). This sign has not yet been applied in the text of the Braille Quran. The researcher proposes using a Braille code with dots 5,6 to indicate this sign.

Examples of coordination practice for *iqlāb* on *nūn sākinah* in a single word:

Table 4.107: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *iqlāb* on *nūn sākinah* in a single word.

PERTIS Braille Quran text	⠠⠏⠞⠢⠢⠰⠠⠆⠠⠩⠠⠥⠠⠦⠠⠥⠠⠨⠠⠭⠠⠤⠠⠩⠠⠥⠠⠦⠠⠥⠠⠨⠠⠱⠠⠎⠠⠬⠠⠥⠠⠦⠠⠥⠠⠨
Arabic transcription	يَنْبَغِي
<i>Muṣḥaf al-Madīnah</i> text	يَنْبَغِي
Braille transcription	⠠⠏⠞⠢⠢⠰⠠⠆⠠⠩⠠⠥⠠⠦⠠⠥⠠⠨⠠⠭⠠⠤⠠⠩⠠⠥⠠⠦⠠⠥⠠⠨⠠⠱⠠⠎⠠⠬⠠⠥⠠⠦⠠⠥⠠⠨

Examples of coordination practice for *iqḷāb* on *nūn sākinah* involving two words:

Table 4.108: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *iqḷāb* on *nūn sākinah* involving two words.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠
Arabic transcription	مِنْ بَعْدِ
<i>Muṣḥaf al-Madīnah</i> text	مِنْ بَعْدِ
Braille transcription	⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠

Examples of coordination practice for *iqḷāb* sign on *tanween*:

Table 4.109: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *iqḷāb* sign on *tanween*.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠
Arabic transcription	صُمْ بَكْمَ
<i>Muṣḥaf al-Madīnah</i> text	صُمْ بَكْمَ
Braille transcription	⠠⠠⠠⠠⠠⠠ ⠠⠠⠠⠠⠠⠠

Finally, a specific Braille code for the *iqḷāb* sign must be generated and placed on the letters read with the rule in order to match the Braille Quran and the *muṣḥaf al-Madīnah*.

Arabic transcription	آمَنُوا
<i>Muṣḥaf al-Madīnah</i> text	عَامِنُوا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Examples of coordination practice for *ṣifr mustadīr* on the letter ya:

Table 4.112: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ṣifr mustadīr* on the letter ya.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	وَمَلَيْهٖ
<i>Muṣḥaf al-Madīnah</i> text	وَمَلَايِيهٖ
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

Finally, the code for *ṣifr mustadīr* must be generated for the Braille Quran and the *al-Madīnah* to be coordinated. The placement of this sign is also highly important for al-Quran readers since it might help them avoid the error of adding *ḥarakāt* when reading, which is especially important for Quran readers who are not Arabic speakers.

4.3.2.18. Ṣifr Mustatīl

In the text of the *al-Madīnah*, the *ṣifr mustatīl* sign is represented by an upward oval or elongated circular symbol. It is put on the letter *alif*, which is not pronounced in the state of continuing the recitation (*waṣl*) but is recited in the state of stopping the recitation

(*waqf*). The letter *alif* linked with this rule of recitation is referred to as the seven *alifs* (*al-Alifat al-Sab'ah*) in the narrative of Hafs (Mohd Rahim, 2018; Aiman, 2020). This is due to the fact that the letter *alif*, which is recited during *waqf* but not during *wasl*, only involves seven words in al-Quran. Regardless, the *ṣifr mustatīl* sign is only placed on six out of seven words related to the rule of *al-Alifat al-Sab'ah* as the word سَلَسِلًا carried two methods of recitation.

This mark has not yet been introduced in the text of the Braille Quran. The researcher proposes that this sign be represented by the Braille code with dots 1,2,4,5. This sign is proposed because it is related to the proposed sign for the *ṣifr mustadīr*, which is the dots 1,4, and the two signs have certain functional similarities. This sign, like *ṣifr mustadīr*, is advised to be placed before the necessary letters to accommodate tactile users' reading methodology.

- a. Recommendations on the coordination practice for the first *alif* letter that is in the word أَنَا throughout the entire al-Quran:

Table 4.113: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah*

for *ṣifr mustatīl* on the *alif* letter in the word أَنَا.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠
Arabic transcription	أَنَا
<i>Muṣḥaf al-Madīnah</i> text	أَنَا

Braille transcription	⠠⠠⠠⠠⠠⠠⠠
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b. Recommendations on the coordination practice for the second *alif* that is in the word لَكِنَّا in *surah al-Kahf* verse 38:

Table 4.114: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ṣifr mustatīl* on the *alif* letter in the word لَكِنَّا.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	لَكِن
<i>Muṣḥaf al-Madīnah</i> text	لَكِنَّا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠

c. Recommendations on the coordination practice for the third *alif* that is in the word الظُّنُونَا in *surah al-Ahzab* verse 10:

Table 4.115: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ṣifr mustatīl* on the *alif* letter in the word الظُّنُونَا.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	الظُّنُونَا
<i>Muṣḥaf al-Madīnah</i> text	الظُّنُونَا

Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
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- d. Recommendations on the coordination practice for the forth *alif* that is in the word الرِّسُولًا in *surah al-Ahzab* verse 66:

Table 4.116: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ṣifr mustatīl* on the *alif* letter in the word الرِّسُولًا.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	الرِّسُولًا
<i>Muṣḥaf al-Madīnah</i> text	الرِّسُولًا
Braille transcription	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

- e. Recommendations on the coordination practice for the fifth *alif* that is in the word اَلسَّبِيلَا in *surah al-Ahzab* verse 67:

Table 4.117: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ṣifr mustatīl* on the *alif* letter in the word اَلسَّبِيلَا.

PERTIS Braille Quran text	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	اَلسَّبِيلَا
<i>Muṣḥaf al-Madīnah</i> text	اَلسَّبِيلَا

Braille transcription	⠠⠋⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
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- f. Recommendations on the coordination practice for the sixth *alif* that is in the word قَوَارِيرًا in *surah al-Insan* verse 15.

Table 4.118: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ṣifr mustatīl* on the *alif* letter in the word قَوَارِيرًا.

PERTIS Braille Quran text	⠠⠋⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠
Arabic transcription	قَوَارِيرًا
<i>Muṣḥaf al-Madīnah</i> text	قَوَارِيرًا
Braille transcription	⠠⠋⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

To conclude, in order to coordinate the Braille Quran with the *al-Madīnah*, a code for the *ṣifr mustatīl* must be generated. The positioning of this symbol is also highly important for tactile Quranic text readers since it might help them avoid the error of adding *ḥarakāt* when reading, which is especially important for Quranic readers who are not Arabic speakers.



4.3.2.19 Tashīl sign

Tashīl is the pronunciation of the letter *hamzah* that alternates between its actual and *madd* pronunciations (Aiman, 2020). There is only one instance in Hafs' narrative when

the letter *hamzah* is recited in *tashīl*, and that is in the 44th verse of *surah Fussilat*. In the text of the *muṣḥaf al-Madīnah*, the *tashīl* sign is a black circular mark above the letter *alif* (Mohd Rahim, 2018). This sign's suggested Braille code is 3,4,5. In the current Braille Quran, this code represents a combination of the letters *hamzah*, *fathah* and *alif*.

Because the letters *hamzah*, *fathah*, and *alif* are written one by one in the text of the *muṣḥaf al-Madīnah*, this code will no longer be employed for the same function to coordinate the text of the Braille Quran with the text of the *muṣḥaf al-Madīnah*. In comparison to other Braille codes, the concept of its application, which incorporates a mix of the letters *hamzah*, *fathah*, and *alif* is seen most suited for reuse to represent the *tashīl* sign instead, which its coordination practice can be recommended as the following example:

Table 4.119: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *tashīl* sign.

PERTIS Braille Quran text	
Arabic transcription	عَاْعَجَمِيٌّ
<i>Muṣḥaf al-Madīnah</i> text	عَاْعَجَمِيٌّ
Braille transcription	

To conclude, in order for the Braille Quran to be coordinated with the *muṣḥaf al-Madīnah*, a particular Braille code for the *tashīl* sign must be allocated and placed on the letters recited with the rule.

Finally, in order for the Braille Quran to be coordinated with the *muṣḥaf al-Madīnah*, a specific Braille code for the *imālah* sign must be replaced with a new, more relevant sign and is placed on the letter that is recited with the rule.

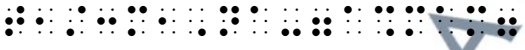

4.3.2.21 *Ishmām sign*

In the text of the *muṣḥaf al-Madīnah*, the *ishmām* sign is similar to the *imālah* sign, which is a solid circle or a specific form (diamonds). If the *imālah* sign is placed beneath the letter, the *ishmām* sign is placed above the letter after its vowel line. The recitation of *ishmām* can only be found in one place, which is in the word **تَأْمَنَّا** in *surah Yusuf* verse 11 (Mohd Rahim, 2018; Aiman, 2020).

The sign for the recitation of *ishmām* is written in the text of the Braille Quran by placing the word **اشمām** (preceded by a dash) in parenthesis after the word that has to be recited with the rule. There are no special markings placed on the letters recited with *ishmām*. The downside of the marking method utilised in this Braille Quran text is that the reader cannot tell which letter in the word should be recited with *ishmām*. The researcher proposes using a Braille code with dots 1,2,3,4 to indicate this type of recitation. Despite the recitations of *imālah* and *ishmām* share similar markers in the *muṣḥaf al-Madīnah*, when it comes to Braille Quran, the researcher asserts a different allocation of sign is better to avoid confusion among the Braille readers as this sign is poorly applied in the related words, specifically in terms of the placement of the sign, either on the letter (for *ishmām* recitation) or below the letter (for *imālah* recitation) as seen in the *muṣḥaf al-Madīnah*.

An example of the coordination practice is as below.

Table 4.121: Coordination between PERTIS Braille Quran with *muṣḥaf al-Madīnah* for *ishmām* sign.

PERTIS Braille Quran text	
Arabic transcription	تَأْمَنَّا- (اشمام)
<i>Muṣḥaf al-Madīnah</i> text	تَأْمَنَّا
Braille transcription	

To conclude, a specific Braille code for the *ishmām* sign has to be revised to a new, more relevant sign and placed on the letters recited with the rule in order to reconcile between the Braille Quran and the *muṣḥaf al-Madīnah*.

4.3.2.22 Hamzah Waṣl sign

The symbol of *hamzah waṣl* in the *muṣḥaf al-Madīnah* is a tiny initial of the sod letter put above the letter *alif*. It serves as a *hamzah* that is added to allow a word to be begun from the *sukoon* state, pronounced at the beginning of a verse, and omitted when connected (Mohd Rahim, 2018; Aiman, 2020).

The situation of *hamzah waṣl* is not indicated in the Braille Quran. Nonetheless, the lack of this *hamzah waṣl* indication is proven to cause extremely few recitation problems. The *hamzah waṣl* indication does not need to be allocated, according to the researcher, to acknowledge the readers of the visually impaired who must memorise

Arabic transcription	إِنَّ اللَّهَ
Muṣḥaf al-Madīnah text	إِنَّ اللَّهَ
Braille transcription	⠠⠈⠤⠠⠧⠄⠠⠧⠡⠢

4.4 Summary

This chapter has completed the study's second objective, which is to examine the system of *Hijaiyyah* letters (*rasm*) writing and punctuation marks (*dabt*) used in the writing of the PERTIS Braille Quran, as well as the study's third objective, which is to theoretically coordinate PERTIS Braille Quran text with *muṣḥaf al-Madīnah* text. The researcher will apply the reconstruction of the Braille Quran text that has been coordinated with the *muṣḥaf al-Madīnah* in the following chapter based on the findings in this chapter. Based on the findings in this chapter, the researcher will fulfil the final objective of the study in the next chapter which is to implement the reconstruction of the Braille Quran text that has been coordinated with the *muṣḥaf al-Madīnah*.