

CHAPTER V : CONCLUSION

5.1 Introduction

This final chapter focuses on a summary of the research based on the research objectives that answered the research questions. The discussion in this chapter is divided into five parts, namely the summary of the research, discussion of the research, conclusion of the research, the implications of the research, contributions of the research and further research recommendations. The researcher proposes the summary of the research in order to make a conclusion related to the entire research conducted. Discussion of the research discusses the data from previous research relevant to explaining the formulated phenomena. Next, the researcher presents an overall summary of the discussion and implications of the research that revolves around the effects that need to be taken by certain parties and followed by suggestions for further research related to this field.

5.2 Research Summary

This section focuses on the summary of the research and an overall discussion that is consistent with the research objectives that have been outlined. Generally, this research is to examine the challenges in learning Braille Quran codes among typical students in USIM. Furthermore, this research aims to explore the learning style of memorising Braille Quran codes among typical students regarding the VAK model which are Visual, Audio and Kinaesthetic. Next, to analyse the learning style of memorising Braille Quran codes.

This research is qualitative approach in the form of a case study involving five participants, specifically students who obtained excellent marks in the course QNR3013. A qualitative approach allows the researcher to explore the process in depth, provide a holistic picture and collect the data in detail.

The interview conducted successfully discovered the students who are taking the QNR3013 course regarding their challenges along with memorising the codes. The interview also found out the learning style used by the students while they develop their memorisation technique on the Braille codes position. The idea of conducting this research was based on exploring learning styles and how students memorise Braille Quran codes well.

In this chapter, the entire data presented is to answer the research questions and is discussed intensively. The research conducted answered all the research questions below:

1. What are the challenges in learning Braille Quran codes?
2. How do students memorise the Braille Quran codes?
3. How effective students' memorisation techniques are?

5.3 Research Discussion

The use of learning style in memorising Braille Quran codes among students is one of the most relevant aspects of discussion towards producing students who are able to reproduce and prepare Quran/*sunnah* texts into Braille codes and create an awareness project with team members in performing community services. A clearer discussion of the research according to the main themes of the research question is as follows:

- 1) Examine the challenges in learning Braille Quran codes including the opinions on the QNR3013 course offerings, interest in the course, the challenges faced by students and the need for specific methods for memorising Braille Quran codes;
- 2) Exploring the learning style practised by students during the process of memorising Braille Quran codes and its effect on code mastery;
- 3) Analysis of the effectiveness of learning style practices on memorisation of Braille Quran codes include memorisation time, duration taken to master the code, memorisation techniques and expectations of the course offerings.

The first discussion began with the examining the challenges in learning Braille Quran code among typical students in an effort to solve challenges in the process of memorising Braille Quran code.

5.3.1 To examine the challenges in learning Braille Quran codes

The challenges to memorise the Braille codes of the Quran among typical students can be summed up at a high level. This is because QNR3013 is a course requires good memorisation and strong memory. This is as explained in the discussion of chapter two as stated by (Ahmad Kamel et al., 2008) *Mushaf* al-Qur'an Braille which uses the base Arabic Braille codes that represent the letters of *hijaiyyah*, line signs such as *fathah*, *kasrah* and *dammah*, and some of symbols such as the *shaddah*, *sukun* and *mad* and others.

The findings of this research show the students have a clear understanding of the QNR3013 course offering which is a compulsory course of the faculty offered by USIM to its graduates. This course offering initiative is an added value to students in approaching the world of Special Education. In addition, students can achieve soft skills to create continuous learning. All research participants have an interest in this course but in the context of the challenges to memorise the Braille Quran codes, they face some challenges in mastering the codes well. Almost all research participants thought that the existence of a special method suitable to the learning style makes it easy for them to memorise the Braille Quran codes well. This coincides with the opinion of Gregorc (1982) cited by Cynthia (1996), who states that each individual has their own learning style (Azizi Yahaya, 2004).

Huda Suliaman and Sadia (2015) state that “learning styles” speaks to the understanding that every student learns differently. Technically, an individual’s learning style refers to the preferential way in which the student absorbs processes, comprehends and retains information.

a. Opinion on offerings QNR3013 subject

This course offering initiative is an effort by USIM in collaboration with PERTIS in bringing its graduates closer to the world of Special Education as an added value and soft skills that graduates must master to create continuous learning. In this regard, USIM is taking a step forward toward achieving its mission of integrating

Naqlī and *‘Aqlī* by formally collaborating with PERTIS in March 2012 (Norakyairee, 2019).

According to Ahmad Kamel et al. (2008), QNR3013 is the first course of its kind offered to FPQS, USIM students. Cooperation between USIM and PERTIS has started as early 2008 in training and guiding FPQS lecturers in delivering the content of this faculty’s compulsory course offering, namely QNR3013 (Norakyairee, 2019).

The findings of the research showed the research participants had never been experienced in learning or participating in Braille courses or specialised training in interacting with Braille Quran. QNR3013 is the first course of its kind studied by them. Uniquely, this course is offered to typical undergraduates who do not have vision problems. Indirectly, students are exposed to the challenges of the visually impaired in interacting with the Quran. To some extent, it has an impact on the awareness of graduates in helping and contributing in developing the teachings of Islam to the community of the visually impaired in Malaysia as an added value and creating continuous learning.

Several states were found to hold Braille Quran classes including Terengganu, Kelantan, Pahang, Kuala Lumpur, Negeri Sembilan, Kedah and Perlis (Siti Nor Azimah, 2014). This makes Braille Quran lessons more widespread and accepted by students in improving Quran recitation.

b. Interest in the subject (QNR3013)

Interest in a subject can be fostered through the tendency of the learning style practised by students in seeking knowledge both in terms of academics and Quran studies. According to Norul Haida et al., (2016), choosing an innovative learning style that is in line with learners’ abilities can make students more active and creative in developing their potential. In this context, this research focuses on students’ interest in the Braille Application course in the Study of the Quran and *Sunnah* (QNR 3013).

The research findings show the students are interested in this courses offered to the typical students. To increase students' interest in learning Braille Quran, typing exercises need to be done frequently in addition to organising quizzes on typing Quran verses using Perkins Brailier apart from being able to increase competitiveness among classmates.

Apart from that, students are given the opportunity by the lecturers to build the appropriate style of memorisation according to each student are comfortable with. Student also excited to learn this course in more depth because there were no such courses or subjects offered either in primary schools, secondary schools or institutions of higher learning (IPT). The course offered can accommodate the gap faced by people with disabilities in terms of reading printed materials, learning Braille for the visually impaired or literacy as an awareness of this isolated group. In other words, this is an added value for FPQS, USIM students because they can learn courses related to the learning of the visually impaired.

The offering of this course can expose students to something new, which is the way people with visual disabilities read to get information and gain knowledge.

c. Challenges in learning Braille Quran

Ahmad Kamel et al. (2008), state that Braille Quran is *Mushaf* al-Quran using Braille code base Arabic letters representing Hija'iyyah, marking lines like *fathah*, *kasrah* and *dammah*, and some of symbols such as the *shaddah*, *sukun* and *mad*. Typically, Braille Quran is used by the visually impaired. However, this course is offered to typical visually literate students at FPQS, USIM. Of course, they face some challenges in learning the Braille codes of the Quran both in terms of memorising the codes and reading during the T&L process. Students need to master the codes well so that they can read the Braille code of the Quran which has lines and some symbols like *shaddah*, *sukun* and *mad* fluently. This refers to the study by Ahmad Yunus Mohd Noor (2016) that affirms that among the challenges faced by students is to master the Braille Quran codes. In addition, teaching time is limited.

The findings of this research show that students face several challenges to master the Braille Quran codes (Dahmil et al., 2020), namely the confusion over the codes of the Braille Quran that are almost the same. Students need to master some codes that indicate special signs such as *mad* signs, punctuation and the like, both in terms of typing and Braille reading of the Quran. It is generally known that the *hijaiyyah* system consists of 28 letters, 9 additional Arabic letters (Muhammad Mustaqim, 2013) followed by 12 vowel lines and 11 *wāqf* signs (Norakyairee, 2019).

A high focus is required for students to type or read fluently. In addition, the study period for Braille Quran is limited to only four months during the beginning of

the semester. Furthermore, students take a long time to form an appropriate technique of memorising Braille Quran codes. Appropriate memorisation techniques are developed to make it easier for students to memorise Braille Quran codes.

d. Special technique

A special technique of memorising Braille Quran codes is not given much exposure by the lecturers to the students. During the T&L session, the lecturers only asked the students to find out memorising style on their own so that students are more exposed to their own memorising style.

Lecturers provide memorisation techniques for Braille alphabet codes and only provide memorisation guidelines for Braille Quran codes without giving specific memorisation techniques. Students are asked to present their memorisation technique and the method is free to be used by other students if it suits the individual's memorisation style. The approach used by the lecturers who teach is to ask students to develop their own style of memorisation of Braille Quran codes so that students can more easily master all the codes in their own style. This is because each student has a different learning style according to their memorisation strength.

In the context of learning Braille Quran, students use several initiatives on code memorisation by building some memorisation techniques for the purpose of improving the memory of all Braille codes such as Digit Techniques, Reflection Techniques and some more.

Some research participants emphasised code memorisation by doing self-training. At the same time, it is followed by some memorisation techniques that have been built. Based on this research, students were not exposed to specific memorisation techniques related to Braille Quran codes during the T&L process. This causes students to take a long time to develop their own memorisation techniques. Meanwhile, students were asked to present their memorisation techniques in front of the class in order to help each other in forming memorisation techniques. In the context of memorising Braille Quran codes, the selection of proper code memorisation techniques can help students memorise codes well and easily besides from a strong memory for memorisation.

e. Improvement to increase student's interest

In the T&L session, the lecturers or instructors must have their own teaching style in order to make students more focused during the teaching and learning process to increase students' interest and the learning outcomes can be mastered by students well to keep T&L objectives can be achieved after T&L session of the semester ended.

Exposing students to Braille Quran typing practice, it can increase students' interest in this course. By holding a quiz reading or typing Braille Quran code also can increase competitiveness among students. In this way can sharpen the student's memorization of each code. In addition, students can familiarise the position of their fingers against the full cell on the Perkins Braille and students become familiar with other functions available on the typewriter.

Eliminating the game element by using special teaching aids for the visually impaired was also suggested by the research participant, namely Edu Braille also known as Dominos. This game is more practical for beginners who want to know the Braille alphabet. Dominos game can be practised for Braille Quran codes that have the same codes as the Braille alphabet.

5.3.2 To explore the learning style of memorising Braille Quran codes among typical students;

a. Learning style

Past studies have discussed the importance of learning style selection in subject learning. This is because, without a learning style, learning is not likely to go well (Lestari et al., 2012). The selection of appropriate learning styles for individuals can have a positive impact on academics. According to Norul Haida et al. (2016), identifying the learning styles that the students are most interested in can help teachers in the process of teaching and learning well. A good learning style can stimulate students to increase their motivation and attract their interest in learning sessions.

Similarly in learning Braille Quran codes, the selection of innovative learning styles is appropriate according to the students' ability to make them more active and creative during the learning and teaching sessions. In addition, it helps students memorise codes well.

In the context of learning Braille Quran codes, all participants memorised using visual style. This is because typical students do not have a strong sense of touch as the disabled do. Typical students memorise Braille codes by looking at each subsequent code supported with notes and exercises using teaching aids such as Swing Cell, Board Braille, Perkins Braille and so on. In addition, a participant conducted their exercise using A4 paper and wrote the number as in the position of Perkins Braille which is 6 5 4 1 2 3. Then the participant made an exercise as if using the Perkins Braille's teaching aid.

Overall, this research was conducted to achieve the research objectives to explore the learning style used by students to memorise all Braille Quran codes well. The results of interviews with students who obtained excellent marks in the course QNR3013 found that students are more focused on visual learning styles and assisted by teaching aids. Students are given guidance on the use of learning aids such as Board Braille, Pocket Braille, Perkins Braille and others. The use of teaching aids helps students better understand its function and use. Students can feel how the visually impaired apply learning aids in their daily use.

In order to meet the needs in education and knowledge of Braille Quran recitation among the visually impaired, students can gain adequate knowledge related to learn Braille and feel the experience that can be used as a basis in caring for the group.

b. Positive Impact

This research was conducted to explore the learning style practised by excellent students in the QNR3013 course in FPQS, USIM and the positive of in applying the learning style of the VAK model. The results of the research found the students can create several memorisation techniques such as Reflection technique, Digit technique and Equate technique which is the similarity of alphabet code and *hijaiyyah* code grouped together.

With the result of this memorisation technique, students are able to memorise the code well. In addition, students take advantage by utilising the use of teaching aids during T&L sessions in the classroom to strengthen their memorisation. There are also students who use A4 paper as a medium of memorisation by making it seem like Perkins Braille. Students write "1 2 3 4 5 6" on the paper and place their fingers in

the position of the numbers written on the paper. This style makes it easy for students to remember the position of the fingers on the Perkins Braille and be able to familiarise themselves with typing the Braille Quran code during the test.

5.3.3 To analyse the learning style of memorising Braille Quran codes

a. Time to memorise

Based on the interviews, students had a different selection of times to start memorising the Braille Quran codes. Among them, students memorise early in the morning before Fajr at 3 a.m to 4 a.m, before the T&L process start and at night. This will make it easier for students during the tutorial class to follow the teaching session with the Lecturer. Revision done before the T&L session starts is better and helps students in developing their memorisation skills.

b. Duration of memorising

In this context, the research found that the time allocated by each participant to memorise all the codes was very limited and insufficient for students. Since they only have 14 weeks of lecture and tutorial sessions, most of their time is focused on the development of memorisation techniques. In addition, students are busy with FYP preparation and other course assignments. However, during the development of such memorisation techniques, students are indirectly accustomed to all the Braille Quran codes.

Students take the initiative by repeating their memorisation according to the memorisation technique they have been coached on. In addition, students take time to memorise every single code. The proficiency of mastering the Braille Quran code depends on the strength of the memorisation technique developed.

c. Memorisation technique

The findings of this research show the students memorise the codes by their own strength which is developed based on the student's compatibility with the technique of memorisation the Braille Quran codes. The research found the average student developed the Reflection technique, Digit technique and Equate technique. This reflection technique is built based on an arrangement of code points that have

reflections. Meanwhile, the Digit technique is arranged according to the number of dots in the cell starting from the one dot, two dots until six dots. Last but not least, the equate technique is built based on the alphabet letter code which is equated with the *hijaiyyah* letter code which has the same code. *Hijaiyyah* letters that do not have similarities will be separated according to the suitability of students to memorise and easy to remember. This way as well as memorising the Braille alphabet codes and the Braille Quran codes can be memorised easily.

The techniques were built based on how do students see the position of the Braille codes learned in each tutorial session. Apart from that, students get guidance from the lecturers on the contraction of the Braille code alphabet memorisation technique. From there, the students got the idea to develop a Braille Quran memorisation technique.

d. Advice and hope for this subject

The research findings clearly show the research participants have a positive understanding of the learning style practised by students in producing memorisation techniques that are appropriate to the strength of students' memorisation. According to Siti Nor Azimah (2014), a good and effective teaching method will able to help students acquire knowledge, skills, change students' attitudes and behaviours and be able to instil the interests and values desired by teachers or lecturers.

5.4 Research Summary

Based on the findings of the research, the researcher made an overall conclusion based on the research questions. Generally, the entire data presented is to answer the research questions posed and discussed intensively. A summary of the research findings that answered the research questions and achieved the objectives of the research is as follows.

The researcher found a description of the understanding of the need for Braille Quran codes learning among typical students. The findings of the research showed that students are interested in the courses offered by the university in highlighting societal issues in bringing students closer to the world of Special Education. This opportunity is an added value to the marketability of USIM graduates to create continuous learning as well as to help people with special needs - visual impairment.

This course is considered new knowledge for most of the student who studies it and they consider it an exposure to something new to deepen how people with visual impairment read especially read the Quran.

However, students do not run away from facing the challenges in learning this course where students need to prepare in terms of memorisation technique of Braille Quran codes themselves based on the guidelines indicated by the lecturer by building their memorisation technique according to the strength of learning style either visually, auditory or kinaesthetic (Norul Haida et al., 2016). Therefore, students take a long time to build their memorisation technique. This is because they need to examine each position of the Braille Quran codes so that it can be more easily arranged according to their memorisation technique (Dahnil et al., 2020).

In the meantime, students love this offered course because it is an added value to USIM graduates, especially FPQS students in helping and contributing critical ideas in developing Syiar of Islam to the Muslim community as well as feeling how visually impaired reading the Quran is. Rarely are such courses offered to the typical group because most of these courses are organised by PERTIS exclusively for the visually impaired people. The results of the research are also expected to provide exposure to several types of learning styles introduced by the VAK Model. In addition, this research also expected to help students and teachers in improving the performance of the QNR3013 course, especially for students who are weak in memorising the Braille Quran codes.

In a nutshell, offering this course is a starting point as the beginning of the typical group's contributing effort and energy in helping to reproduce and prepare Quran or *Sunnah* texts into Braille codes by using teaching aids such as Perkins Braille, Pocket Frame and so on apart from various teaching aids of memorising Braille Quran codes. At the same time, students are able to be kind to this group in facing the challenge of reading the Braille Quran apart from students being able to read and understand Braille codes in malls and public places. Thus, the skills in forming the Braille Quran codes memorisation technique must be mastered well apart from building and processing specific memorisation techniques that can be used by students in the future to facilitate students without taking a long time to develop code memorisation techniques.

5.5 Research Implications

This section discusses the implications of the research resulting from the research findings based on the VAK theory in learning practice. Overall, this research provides an overview of the research objectives successfully achieved to see the learning style practised by students in the course QNR3013 based on the VAK learning style. The findings show that the approach to the selection of appropriate learning styles should be practised by students during the period of T&L as well as code memorisation. It is not only subject to the QNR3013 course, but can even be applied to other courses. This can increase students' motivation in achieving excellent learning. In addition, students can cultivate the attitude of competing with classmates in a healthy way in cultivating knowledge, as well as continuous training and learning.

The selection of students' learning styles should be given attention so that the effectiveness of memorising the Braille Quran codes can be improved and given attention. The challenges which hinder the effectiveness of the code memorisation process need to be identified so that any issues and challenges can be overcome. The selection of learning styles according to the suitability of students is seen to have implications for technique and approaches holistically in the teaching and learning process, especially for the QNR3013 course. Aside from helping students master Braille codes well, students easily answer the tests given by the lecturer.

In short, memorisation of Braille Quran codes among typical students can be seen more easily with the help of the VAK learning style. Thus, the memorisation technique can be built systematically to facilitate memorisation according to the technique practised by students whether Reflection technique, Digit technique or Equate technique. These findings can be translated in Figure V-I:

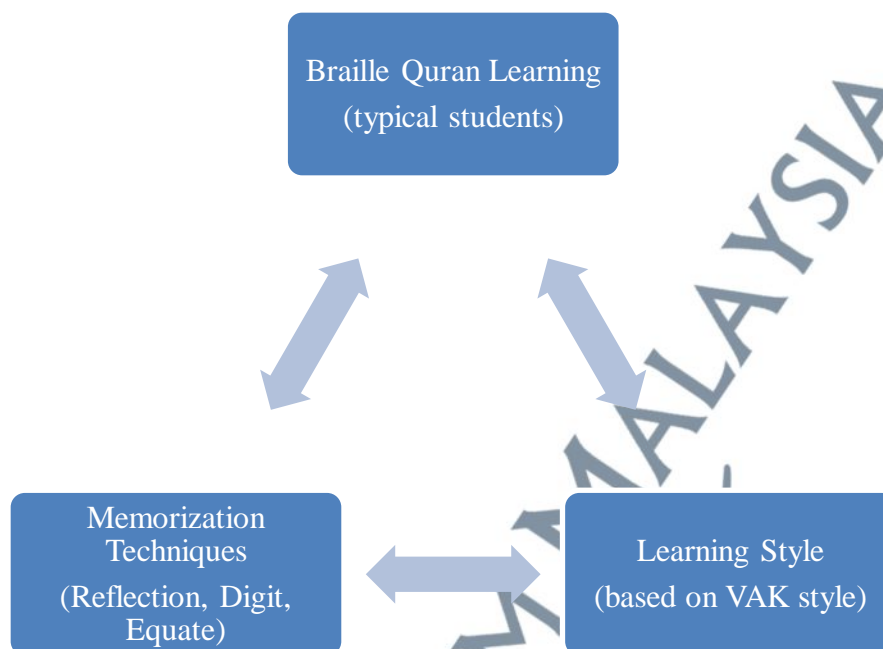


Figure V-I: Summary of student learning styles

Based on this Braille Quran learning style, the researcher can conclude most of the research participant practice visual learning style. While, one of them combines visual with audio learning style in the process of memorising Braille Quran codes. Also, none of them adopted the kinaesthetic style.

Learning Style	Research Participants
Visual	5
Audio	1
Kinaesthetic	-

Table 8: Summary of learning styles practiced by research participants.

In addition, it can be concluded the two research participant practice the reflection technique, two research participant builds the digit technique and the other two research participant memorise using the Equation technique. This is because one of them implements digit and equated technique at once.

Memorisation Technique	Research Participants
Reflection	2
Digit	2
Equate	2

Table 9: Summary of memorisation techniques practiced by research participants

5.6 Research Recommendations

Based on the research limitations, the findings of the research cannot be generalised in a broader context. Therefore, the researcher submitted several research proposals to implement further research in the field studied, especially the learning of Braille Quran in Malaysia in depth. Among the suggestions are as follows:

1. This qualitative research only involved students of Sunnah and Information Management Studies and focused on only one class. Therefore, further research is recommended to be done by involving several classes and other study courses such as Quranic and Sunnah Studies and Quran with Multimedia Studies.
2. This research uses a qualitative methodology that uses observation and interviews as the main instrument for the purpose of knowing in depth the learning style used by students. Therefore, future research might include multimedia learning aids as well as printed learning aids.
3. This research involved the learning style of typical students who took the QNR3013 course only. Accordingly, further studies can be done on the learning styles of people with visual impairments.

5.7 Conclusion

Based on the findings, the conclusions can be presented. Generally, this research has provided an initial overview of the ability of students to memorise the Braille Quran codes and be able to apply them in reading as well as writing the Braille Quran codes. The selection of the appropriate learning style can produce students who are excellent in the process of memorising the Braille Quran codes and then produce creative and quality students in producing students who care about disabilities.

Other than that, this chapter also summarises the findings of the research as a whole based on the discussion of the research findings. Next, some implications of the research are also discussed. At the end of this chapter, the researcher proposes some further research for the purpose of enhancing efforts towards improving the learning of Braille Quran in an effort to help the visually impaired in particular.

