

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the details of the procedures employed to attain the study objectives. Four key objectives were established based on the research questions. The researcher has developed a study approach, data collection methodologies, data collection tools, and analytic procedures to meet each objective. The qualitative approach was applied in this research. The data for this study came from analysis processes on associated text as well as semi-structured interviews with research participants who are directly involved in this field of study. The findings were analysed in order to get information that will be used to answer the research questions. The overall findings from the text analysis and semi-structured interviews were then used to achieve the study's third and fourth objectives, which are to coordinate and reconstruct the

Braille Quran text using the *rasm* and *dabt* approach, and align to that employed in the text of the *muṣḥaf al-Madīnah*.

3.2 Study Design

The planning to perform a study is known as study design. This study employs a qualitative approach with the purpose of exploring the skills contained in the Braille Quran text and subsequently defining the basic teaching methods of the Braille Quran that are friendly to visually impaired persons. In qualitative research, planning is generally broader than in quantitative research (Othman, 2007). In qualitative research, the assumption is that the researcher knows very little about the studied material. The researcher just has a broad concept, and it is their goal to fully comprehend the subject under investigation (Nur Hanani, 2014). The reasoning for this qualitative method's appropriateness is based on the fact that exploring abilities and teaching techniques is a process with a complex research structure. It entails a research project that focuses on the why and how of a problem rather than merely the what, where, and when (Akhiar & Shamsina, 2011). Hence, the qualitative research is more suited and accurate for answering the questions of this study. The diagram below depicts the whole research implementation procedure.

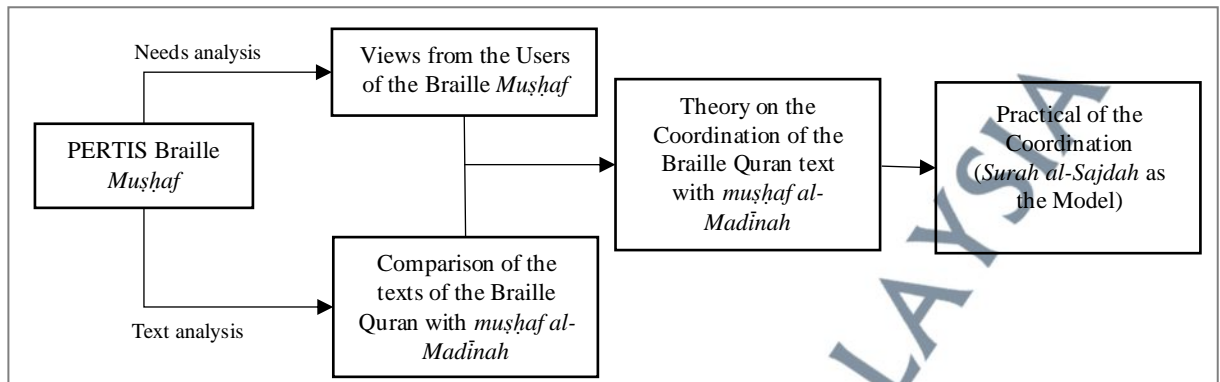


Figure 3.1: Implementation of the Study

Within the framework of data collection, the study has gone through two primary phases. The first phase is the gathering of data on the needs for coordination of the PERTIS Braille *muṣḥaf* with the *muṣḥaf al-Madīnah* printed by Mujamma' Malik Fahd from the perspective of the visually impaired persons as the primary users of the Braille Quran, while the second phase is the researcher's study of the writing system of the *hijāiyyah* letters (*rasm*) and punctuation marks (*dabī*) used in the writing of the PERTIS Braille *muṣḥaf*.

The interview method was used to gather information for the first phase. The researcher divided the research questions into three parts during the interview process: the first part focused on the research participants' demographic information, and the second part focused on issues and problems that appeared during the period when the participants interacted with the PERTIS Braille *muṣḥaf*, especially when compared to the printed *muṣḥaf* used by the typical group. A number of research participants with expertise in using and engaging with the Braille *muṣḥaf*, as well as experience in the field of al-Quran education, were recognised as the key contributors to the required data in order to acquire the best results.

The foundation for the interviews is based on the case study design. This design has been adopted by various researchers in several disciplines, the most recent of which was employed by Mohd Aderi and Noraini (2014), Ahmad Yunus (2011) and Kamarul Azmi (2010). A case study, according to Merriam (2001), is adopted to fully comprehend an event and provide meaning to people concerned. The researcher wanted to explore, evaluate, and gather data that was rich in information, therefore this type of study was conducted (Merriam, 2009; Patton, 2009; Othman, 2007) related to the issue and problems arising along the interaction process with the Braille Quran among the visually impaired persons in terms of the *rasm* and *dabt* of the *kalāmullah* scripture.

The researcher strived to have a better understanding of this scenario by looking into the concerns and problems that visually impaired people face while interacting with the Braille *mushaf*. It entails a thorough examination of components linked to al-Quran text's composition from the perspectives of *rasm* and *dabt*, as well as other relevant perspectives such as format and compilation.

As a result, the researcher discovered that case studies are best suited for the researcher to analyse and examine in detail in order to acquire a strong understanding of the process.

The case study as a research design allows the researcher to obtain thorough data from the perspective of study participants, allowing them to apply various data triangulation approaches to increase the study's trustworthiness (Haig, 1995; Strauss & Corbin, 1998; Tesch, 1990; Yin, 1994). The case study can provide rich, in-depth data that is not typically available through other methods (Othman, 2006; Yin, 1994). Othman (2006) affirms that the case study is a flexible and proficient study design that uses a variety of data collection methods. The case study, he continued, focuses on

holistic descriptions and descriptions in which the variables of the event under study are unlikely to be separated from their context, and can lead to the discovery of new meanings, broadening the reader's experience, or confirming what is already known.

Another benefit of qualitative case studies is that they allow researchers to witness and investigate events and processes that occur in the actual environment (Marohaini, 2004). This is due to the fact that this study was not based on hypothetical or theoretical evidence at the beginning, but instead evolved as the research developed (Mohd Majid, 1993). Therefore, the design of this study is suitable because it can provide a full picture involving multiple locations to naturally explain the occurrence and the ability to answer the research questions.

After gathering information from the interview, the researcher analysed the data, which served as the foundation and guide for the third study's objective of theoretically coordinating the text of PERTIS Braille *muṣḥaf* with the text of the *muṣḥaf al-Madīnah*.

The researcher then moved on to the second phase, the data gathering and analysis of the Braille *muṣḥaf* text, which focused on the type of Braille writing used. This study looks at the scope of writing letters (*rasm al-Quran*) as well as the letter marking system (*ḍabt al-muṣḥaf*). The major study document is the text of the Quran written in Braille, specifically the PERTIS Braille *muṣḥaf* (Al-Quran al-Karim bi *al-Kitābah al-Arabiyyah al-Nafirah*) published by the Malaysian Association of the Visually Impaired (PERTIS), date of published 2015M / 1436H. This *muṣḥaf* has gained the recognition from JAKIM and approval from the Al-Quran Printing Control and Licensing Board (LPPPQ) of the Malaysian Ministry of Home Affairs (KDN). In Malaysia, it is the most often used *muṣḥaf* of the Braille Quran by the visually impaired.

3.3 Administration of the Study

3.3.1 Needs Analysis Phase

This study divides interview sessions involving field activities into the pilot study phase and the actual study phase, as proposed by Zetty Nurzuliana (2016). The goal of the pilot study phase is to establish relationships with research participants, familiarise the researcher with the setting, familiarise the researcher with the study protocols and gain permission to perform investigations. The researcher will be able to go through the actual study phase more smoothly and effectively after going through this pilot study phase.

3.3.1.1 Semi-Structured Question Inventory

In preparation for a pilot study, the researcher will compile a list of questions for a thorough interview process. The inventory will be examined by the supervisory professor to ensure that the study objectives and questions are in sync. Confirmation of this supervisor is also one of the types of data dependability, because Bogdan and Biklen (2003) claim that one of the ways to ensure the validity of qualitative data is to have supervisors and research colleagues affirm the regularity of the studies undertaken.

3.3.1.2 Pilot Study

The pilot study was conducted during the needs analysis phase, which includes field studies, such as interviews. This phase of the pilot study is designed to assist the

researcher in identifying difficulties that may develop during field studies. According to Dey (1993), this procedure allows researchers to take specific steps to ensure that the investigations they are doing are conducted correctly. Observation checklists and interview procedure questions that research participants could not comprehend, as well as questions that were unclear or understandable with varied interpretations, are all possible issues (Norakyairee, 2019). Yin (1994) asserts that pilot studies can assist researchers to enhance data collection strategies and are not intended to acquire data, but rather to investigate the study process and identify flaws in the study methods that have been drafted (Marohani, 2004).

A pilot study was done at one of the Braille Quran teaching centres for the visually impaired once the researcher had successfully prepared questions relating to the study. The pilot study method took three days to complete (October 17, 2018, until October 19, 2018). According to Marshall and Rossman (2006), performing pilot studies will boost researchers' confidence in conducting studies as well as offer them an understanding of how to enter the area and the methods of data collection that are employed. Researchers will also receive significant experience conducting interviews and will be able to rectify flaws and weaknesses in the instruments to be used (Merriam 2001).

The researcher became familiar with study participants throughout this pilot study phase, resulting in a pleasant interaction between the researcher and research subjects. Furthermore, the researcher discussed the goal of the pilot study, its duration, and other relevant details in detail so that participants could comprehend and not feel uncomfortable during the investigation.

The researcher was equipped with interview techniques as well as equipment such as recording device before conducting the pilot test.

3.3.1.3 Actual Study

The interview's actual study phase began on May 31, 2019, and ended on December 27, 2019. The researcher contacted each Braille Quran study centre for the visually impaired and gained approval and permission to conduct the study. Several meetings took place with six Braille Quran instructors to deliver information about the investigation, including the goal, data collection techniques, risks that may be encountered throughout the investigation, and their right to withdraw at any moment. The researcher's efforts to obtain the research participants' permission were made considerably easier due to the good relationship that had been developed between the researcher and the research participants. The researcher had requested research participants to sign a letter indicating their consent to get involved in this study.

The researcher's study took place in six Braille Quran study centres for visually impaired persons. The researcher allocated two to three weeks for each location, with an average of three to four visits each. The researcher wanted to collect intensive and comprehensive qualitative data on the initial visit, which took from three to six days on average. The second visit was dedicated to the gathering of observational data and document analysis, as well as the submission of interview texts for evaluation and verification to research participants. The third and fourth visits were used to gather the enhanced and validated interview text, as well as to complete observation data and analyse incomplete documents. In addition, the researcher conducted interviews with

research participants' co-workers as well as students who enrolled the study session in order to improve the data's validity and dependability.

3.3.2 Design and Development Phase

During this phase, the researcher used the data collected in the previous phase to create a fundamental approach that will be employed in the development phase. All of the issues and requirements gathered as a result of the interview as well as the study of the Braille Quran text were organised orderly according to the priority of the elements that will be coordinated and reconstructed in the future phase. The arrangement starts with the *rasm* element and then moves on to the *dabt* element. The researcher used *Rasm 'Uthmānī'*'s distinctive framework for more systematic analysis when compiling the *rasm* element. From the point of implementation in the PERTIS Braille Quran text, each of *Rasm 'Uthmānī'*'s attributes was analysed. The researcher used this study to determine whether or not the forms of *rasm* writing present in the *mushaf* of the PERTIS Braille Quran are in conformity with the *mushaf al-Madīnah* text.

In order to plan the development of *dabt* elements in accordance with the *mushaf al-Madīnah*, the same precise process used to analyse *rasm* elements was applied to the *dabt* element.

3.3.3 Braille *Mushaf* Text Reconstruction Phase

The researcher had chosen a surah as a development sample during this phase of reconstruction of the *mushaf* text of the Braille Quran. Each verse from the surah was obtained from the PERTIS Braille *mushaf* text and will be coordinated one by one

according to *rasm* and *ḍabt* in the Standard al-Quran text by Mujamma' Malik Fahd. The design done in the previous part of the analysis will play a big role in this coordination. The coordination was done by presenting relevant text in a box separated into four spaces horizontally by the researcher. In the top row, Braille's written text from the *muṣḥaf* of the PERTIS Braille Quran was placed. Under the column, the researcher placed the text's transcription into a standard writing style that incorporates al-Quran's *hijā'iyah* letters (*rasm*) and *ḍabt*. The researcher then inserted the normal written text from the *muṣḥaf al-Madīnah* in the third column. In the fourth column, the text was transcribed into Braille writing. The researcher then elaborated on the different types of coordination seen in the text using explanation remarks.

3.4 Data Collection Method

Marohaini (2001) affirms that the data collection and analysis stage of a study, particularly qualitative studies, is a critical stage that might decide the study's success or failure. Data collection methods were generated from document materials and interview protocols in this study, with the researcher serving as the primary instrument. As a result, a researcher must possess the knowledge and abilities to manage all of the approaches used in the research.

For the production of the findings of this study, findings from multiple sources contribute to maximum comprehension, overcoming the problem of construct errors, and resulting in more consistent (Yin) as well as complete and deeper (Peshkin, 1993) findings. According to Merriam (1998), all sources are rarely used at the same time;

instead, only one or two of the study's principal data sources are employed, while other sources are used to support and assess the validity of the study's findings.

Table 3.1: Objectives of the Study and the Data Collection Method

Objectives of the Study	Data Collection Method
Objective 1: To identify the necessity to coordinate the PERTIS Braille <i>muṣḥaf</i> with the <i>muṣḥaf al-Madīnah</i> printed by Mujaḥma' Malik Fahd from the perspective of the visually impaired as the primary user.	Interviews
Objective 2: To analyse the <i>Hijāiyyah</i> letters writing system (<i>rasm</i>) and punctuation marks (<i>ḍabt</i>) applied in the writing of PERTIS Braille <i>muṣḥaf</i> .	Text Analysis
Objective 3: To coordinate the texts of PERTIS Braille <i>muṣḥaf</i> with the texts of <i>muṣḥaf al-Madīnah</i> theoretically.	Based on the findings in Objectives 1 & 2
Objective 4: To reconstruct the text of PERTIS Braille <i>muṣḥaf</i> that is oriented to <i>muṣḥaf al-Madīnah</i> from the aspects of <i>rasm</i> and <i>ḍabt</i> based on the conducted coordination.	Based on the findings in Objectives 3

3.4.1 Interviews

The first objective of the study is to identify the necessity to coordinate the PERTIS Braille *muṣḥaf* with the *muṣḥaf al-Madīnah* printed by Mujaḥma' Malik Fahd from the

perspective of the visually impaired as the primary user. The researcher achieved this goal by conducting systematic sampling interviews with research participants.

3.4.2 Sampling Procedures of Research Participants

This study requires the purposive sampling method in order to conduct the interview procedure. Purposive sampling is a method of gathering samples from anyone in the population who meets the study's requirements. The researcher chooses samples and locations where they should be able to deliver accurate data (Creswell, 2003; Gay & Airsaian, 2003; Sabitha, 2005). The ability to communicate information about a problem comprehensively and meaningfully is also a factor in the sampling of research participants (Creswell, 2003; Gay, Mills, & Airasian, 2000).

For this reason, the researcher performed a survey of five Braille Quran learning institutions and identified twelve eligible research participants, but due to the saturation of the information acquired, only seven research participants were chosen. Another aspect that influenced participant selection was each person's desire to cooperate and commit until the completion of the study. Due to time constraints and appropriateness issues, several candidates were unable to provide cooperation and commitment until the end of the study. This supports Taylor and Bogdan's (1984) argument that the best criteria for selecting participants and venues are that the researcher can easily make assessments, form relationships with research participants, and collect data precisely according to the researcher's preferences. According to Patton (2001) and Mason (2002), who stated that in the purposive sampling approach, the research participants were chosen based on factors such as the need to answer the study question, willingness

to cooperate in interviews, and ability to supply the necessary information. However, the study's size of seven participants was acceptable for the period allotted and had no effect on the study's quality.

3.4.2.1 Selection of Research Participants

A key factor in determining a study's success is the selection of suitable research participants. Research participants are often a specified set of persons who are usually chosen on purpose. The results of the study only describe the features of the subject and can help the researcher comprehend a complex problem that is extremely broad (Othman, 2007; Denzin & Lincoln, 2005; Bogdan & Biklen, 2007). Participants were chosen for this study based on a number of characteristics, including their ability to give rich data to answer study questions, their willingness to work together to be interviewed, and their willingness to supply the essential information. The researcher established three key criteria for the selection of study participants in order to get answers to each question in this study. All research participants must be:

- a) A user of the Braille *mushaf* for more than 10 years.
- b) A proficient and good mastery in reading Braille Quran text.
- c) Is also a Braille Quran instructor, whether formally or informally, in a special education school for students with visual impairment or in any Braille/Braille Quran learning institution in Malaysia.
- d) Have at least five years of experience teaching visually impaired persons in Malaysia, either in a special education school or any Braille Quran learning institution.

According to Patton (1990), there were no standards for calculating the size of research participants in qualitative studies. It depends on the target, the study's objective, and the time and resources in hand. According to Peshkin (1993), the research participants should be able to answer all of the study questions. According to Patton (2001) and Mason (2002), research participants should be chosen based on their ability to answer study questions, be willing to cooperate in interviews, and supply the necessary information. The number of research participants is determined by the study question until saturation is reached.

Following the identification of prospective candidates, the researcher met with them to express the willingness to work with them as research participants. The goal of the study as well as the essential data collection techniques were explained to the candidates. Furthermore, the researcher discussed the advantages of their participation on themselves as well as their impact on the field of Quranic studies. Participants in the study were also told that any information they submitted would be kept private and anonymous and would only be used for research purposes. This is intended to alleviate anxiety and instil a sense of tranquilly among the prospects.

The next step is to gain the candidate's consent to participate in the study by having them read and complete the consent form as a research participant. The researcher then requested their schedules and established mutually agreed settings for the interaction session meeting in the form of interviews with the research participants.

Throughout the study, the researcher made every effort to maintain positive relationships with the research participants in order to avoid any issues that could compromise the study's quality. Bonding between the researcher and research

participants allows the researcher to more readily immerse themselves in the culture of the subject under study, and it is also required for the researcher and research participants to develop empathy and understanding (Hitchcock & Hughes, 1995).

3.4.2.2 Validity and Reliability of Data

Validity refers to the inference of something meaningful and helpful from test scores. It is used to determine whether a measurement or indicator employed in the study possesses all of the features that should be present in the measured concept to characterise the research's quality elements (Azizi et al., 2010; Sabitha Marican, 2005). The validity aspect of qualitative studies refers to the ethical part of a research in which the honesty, depth, and detail of the data acquired should be carried out in a professional manner (Cohen et al., 1986). The validity of qualitative data, according to Sabitha Marican (2005), relates to the amount to which the researcher's trust in the analysis of the data acquired appropriately depicts the issue or phenomenon researched. The validity element of this study is viewed through the categories of method validity, namely internal validity and external validity. This category refers to the procedures and methods used to acquire data.

3.4.2.3 Internal Validity

Internal validity, according to Merriam (1998), is the concern of how the study's conclusions describe reality. The crucial question is whether the researcher accurately recorded the findings as the incident unfolded. Merriam further added,

the researcher will probably be able to record findings in parallel with real-life events since the reality that is generated in human beings is absolutely capable of being understood by the researcher himself as a human being. Internal validity in qualitative studies can be improved in a variety of ways, including:-

3.4.2.3.1 Member Validation

The research participants examine the findings to ensure that they match what they really mean, which is known as member validation. It explains what is truly going on in their social lives. Participants in the study can contribute facts that they had not considered before, as well as modify or correct the information provided (Moleong, 2000). Examining and confirming the transcription of the interview material, for example, will improve the study's internal validity.

3.4.2.3.2 Results Assessment

The supervising committee of the researcher, who has substantial expertise and experience in the topic investigated in terms of content and methodology, is in charge of evaluating the results of this study. According to Bogdan and Biklen (2007), one of the types of data dependability is supervisor confirmation, which states that one of the ways to ensure the validity of qualitative data is to have supervisors and research colleagues affirm the regularity of the studies undertaken.

3.4.2.4 External Validity

External validity relates to the extent to which the results can be generalised to other situations. In general, qualitative research does not aim to generalise; rather, it aims to comprehend a specific example or phenomenon in-depth, rather than comprehending what happens in the vast majority of cases (Merriam 1998). However, the issue of generalisation is still relevant, but from a different perspective, because generalisations pertaining to research findings can be applied to other study contexts in qualitative studies. The researcher will endeavour to provide a clear, precise, and in-depth account of the investigations done in order to ensure that the findings of one study may be generalised (Cohen et al., 2002). There are two approaches to increasing external validity:

3.4.2.4.1 Detailed Description

In this case, the researcher must provide an in-depth, clear, and detailed description so that the reader can assess whether the study's circumstances may be applied to other research scenarios.

3.4.2.4.2 Criteria Description

In this case, the researcher will define the criteria or common qualities of the phenomenon or individual under investigation so that the reader can compare it to the findings of the study. The literature review offered in the study is used to explain the common traits.

3.4.2.5 Data Reliability

According to Azizi et al. (2007), the measurements used in social science and psychology are the same as the features that exist in humans, with the degree of change varying throughout time. Despite the fact that their state is stable, controlled, and consistent, it might change depending on the situation. In qualitative research, reliability refers to the researcher's observation of an individual or phenomenon to see if it has internal or external consistency. In this study, reliability refers to the researcher's assessments of research participants' internal and external consistency. Internal consistency relates to how well the information gathered is organised. Are the actions of research participants constant across time and in different social circumstances, for example? External consistency is achieved by the modification of observations collected from a variety of other data sources (Sabitha Marican, 2005).

To improve data reliability, various procedures must be taken, as proposed by Bogdan and Biklen (2003) and widely used by Hamdi (2011) and Kamarul Azmi (2010), such as supervisor and field expert confirmation of the semi-structured inventory of questions, pilot studies, and experts validation of the themes produced.

3.4.2.6 Study Data Verification

Following the completion of the interview, the researcher converted the interview data into verbatim and write it in the form of transcription in order to correctly record the interview. A copy of the finished transcription was returned to research participants for

evaluation and verification, as well as to add or remove any portion of the interview. The researcher created a complete interview text after confirming the statement and signatures of the research participants.

3.4.3 Administration of the Study

The research was divided into three phases. The first phase is the need study, which consists of two activities: a semi-structured interview with several users of the Braille *mushaf*, as well as the researcher's gathering and analysis of data from the Braille Quran text. The researcher established a design for the goal of coordination in the second phase, which will be used in the third phase, which is the reconstruction of the text of the Braille *mushaf*.

3.5 Data Analysis Procedure

Once the data has been acquired, the data analysis method allows the researcher to identify meaning in the data in order to answer the research questions. Data analysis is a systematic method of generating meaning by testing, categorising, and combining multiple sources of information (Yin, 1994). The process of assessing data in qualitative studies is difficult and begins as soon as the data collection phase is completed (Spencer, Ritche, & O'Connor, 2005). This is a complicated procedure that requires the evaluation of concrete and abstract data, inductive and deductive reasoning, and description and interpretation. As a result, controlling and categorising data is the most crucial

component throughout the research, from the beginning to the finish of the study's conclusion stage (Merriam, 1998).

The data used in this study was derived from two main sources: interviews and text/document analysis. The qualitative data analysis process, according to Strauss and Corbin (1990), is separated into two stages: current and post-data collection. Data is collected and analysed during the data gathering process (Cresswell, 2003). After a rigorous data collection process, intensive analysis was carried out. The method of data analysis for a study includes tasks such as verbatim data transcription, data screening, topic construction, theme coding, and findings display.

3.5.1 Interview Data Analysis

To assist the analysis process, the recorded data from the interview procedure was streamlined in the form of text through the data transcription process. The information was then filtered by organising, structuring, and interpreting it in accordance with the study's criteria. A data management system was implemented to manage such massive and unstructured data. The researcher employed manual approaches in this investigation. The data were then categorised according to the theme, resulting in quality data for the studies, once it has been cleansed and comprehended by several readings. This procedure also eliminates non-study data until the next task becomes easier and more fluid.

The thematic analysis framework for qualitative data created by Virginia Braun and Victoria Clarke was used to analyse interview data in this study (2006). This framework consists of six stages that must be followed in order to evaluate the data and

provide a thematic analysis of the successfully gathered interview data. The six stages are depicted in the diagram below:

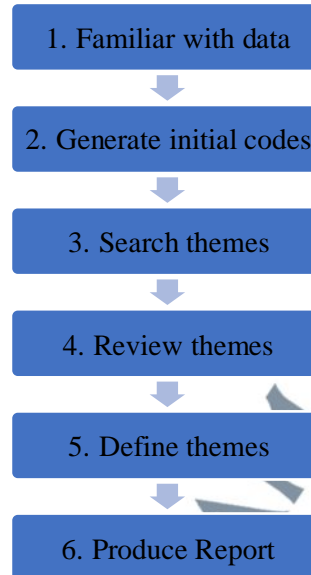


Figure 3.2: Six stages of interview analysis by Braun and Clarke

The initial stage is for the researcher to become acquainted with the collected data. The researcher must dive into and evaluate all of the data received as a consequence of the interview during this step. The procedure employed is to transcribe the interview material that had been recorded and then read it over and over again. The researcher can also listen to recordings of interviews that have been carefully and repeatedly conducted. Ideas and crucial information found in the transcription of the text or heard through the audio must be documented. The researcher can have a full understanding of each material found in the interview data by using this strategy. This initial step will serve as a firm foundation for the next stage, which is to extract the code.

The researcher must issue certain codes based on their understanding of the qualitative data that has been thoroughly examined. These codes represent significant and intriguing points derived from study data and research questions. To put it another way, these codes represent a broad list of the study's essentials that will be organised into more precise themes.

The search and classification of themes is the third stage. The codes from the second stage must be classed according to the topic. Some of the code must be coupled with other code that is similar in theme. While some code from the same source must be isolated or broken down to generate the proper theme or sub-theme. The researcher must study and evaluate the relationships between existing codes in order to create a sub-theme and consequently create a theme.

The process of re-evaluating the concepts that have been produced is the fourth stage. All of the ideas and coding discoveries from the third step are revisited in this phase, with the manner they are judged suited to each one being reconsidered, and new, cleaner themes being developed. The themes that were discovered to be unable to meet the study's objectives must be better explored and excavated so that the concepts generated by the categories or classifications can be translated. In this regard, the researcher should make sure that the data in the themes are consistent, has a clear meaning, has various features, is correct, and can be distinguished from one another (Braun & Clarke, 2006).

The relevance is, this process assures that each subject developed is fully logical and acceptable. The process of reviewing and redeveloping these themes should be able to support the complete data set, describe the need for theme division, explain the relationship between sub-themes, and investigate the departure of new themes from the

existing data. The researcher should be able to come up with amazing ideas to form varied themes by the end of this process, and they should be able to explain how all of these themes are related to one another to form a thorough explanation for the study.

The action of defining the topics is reflected in the sixth stage. Based on the data content, the developed themes are defined and given clear and relevant titles.

The authoring of the report is the sixth and final stage. At this point, researchers must translate their analysis into a report that can portray all of the data and respond to all of the research questions.

The names of the study participants and the institutions participating are tagged (coded) to ensure that the data is managed effectively. A code is a unit of a word or phrase with a specific meaning that is used to express a sentence or a word in relation to a comprehensible event. Codes are conducted on the created topics as well as the sub-theme network, in addition to the names of participants and institutions. The codes are created and organised into categories, like reorganising scattered objects (Weirisma, 1995). The coding technique, according to Miles and Huberman (1994), was done to reduce the amount of data. Encoding can also help with comprehension of the data's significance, and according to Miles and Huberman, coding is also an anaesthetic process. The code is then employed in producing the report of the study's findings, particularly in chapter four, as well as in the study's analysis and discussion.

Qualitative data analysis is a continual process of interpretation based on research questions. The researcher aims to grasp the data collected as well as the literature's direction in order to find and provide sense to the data. The researcher discovered that the idea development process continues even though it is not as intense

as it was during the data gathering phase when they implemented the data analysis procedure. This is because, as the procedure progressed, the researcher discovered new themes as a result of the continual comparison method used in data analysis. The researcher had assigned the focus of the categories contained in the conceptual framework model of the study and the research question as a basis or guidance to compare with the data collected to prevent straying from the study's aims (Miles & Huberman, 1994). After the theme has been established, the researcher must conduct an expert evaluation to confirm the data's validity and dependability.

3.5.2 Data Analysis of the Braille *Mushaf* Text

Merriam (1998) asserts that documents in qualitative investigations refer to data sources other than interviews and observations. Researchers can easily collect document data from a variety of sources, including written documents, physical images, and artefacts associated with studies (Merriam, 1998). Letters, memorandums, official statements such as agendas, announcements, minutes of meetings, written reports on an event, administrative papers such as recommendations, updates on the development of documents and materials disseminated in the mass media are among the sources of documents. Official documents, personal documents, and cultural documents are the three sorts of documents identified by Taylor and Bogdan (1984). Internal and external communications, as well as personal files, personal documents such as diaries, personal letters, and autobiography, are examples of official documents, whereas cultural documents include videos, films, television, magazines, newspapers, and advertisements (Sabitha, 2005). Documents are employed as data sources because they are stable, easy to get, and include materials that match research (Moleong, 2000).

(Merriam, 1998). Furthermore, unlike interviews or observation, documents have a stable nature because they are not altered by the presence of researchers (Merriam, 1998).

The method of text analysis is the most accurate approach to utilise in order to achieve the second objective of the study, which is to evaluate the writing system of *Hijāiyyah* letters (*rasm*) and punctuation marks (*ḍabt*) used in the writing of the PERTIS Braille *muṣḥaf*. This is due to the fact that the writing system of the *Hijāiyyah* letters (*rasm*) and punctuation marks (*ḍabt*) of the Braille *muṣḥaf* can only be determined by reference to the Braille *muṣḥaf* itself, as Braille writing is not the same as Arabic writing. The text analysis refers to a review of the *muṣḥaf* text of PERTIS Braille *muṣḥaf*, which is the focus of the research. The results of the text analysis were compared to the results of previous investigations. The triangulation on a data collecting approach that serves as an amplifier to the data gathered by the researcher was used to collect data from these two types of sources.

3.6 Summary

The study was designed utilising a qualitative approach as the primary methodology in light of the research objectives and questions. The research was carried out in three phases. The first phase is to assess the needs in coordinating the text of the Braille *muṣḥaf* with the text of *muṣḥaf al-Madīnah*. There are two elements that must be studied at this time. The first part is the necessity from the perspective of the Braille *muṣḥaf* users, who are visually impaired, and the second element is from the perspective of the researcher as a Quran scholar. The data for the study of the needs of users of the Braille

mushaf was collected through semi-structured interviews with seven research participants. Participants in this study were chosen for their ability to be dedicated users of Braille Quran while also being skilled in the fundamentals of Quranic knowledge and experienced in teaching it. The researcher chose study participants based on these characteristics in order to gather more clean and accurate information from the data. Simultaneously, the researcher performed in-depth research on the Braille Quran text, determining the status and pattern of its writing from the point of *rasm* and *dabt* implementation.

The researcher completed the coordination in the second phase by recommending the reconstruction of the text of the Braille *mushaf*, which is incompatible with typical al-Quran's *rasm* and *dabt* techniques. The proposals that were presented were theoretical.

After completing the coordination on a theoretical level, the researcher completed the coordination on a practical level by re-establishing the writing on a sample of the Braille Quran text. The researcher had selected surah al-Sajdah as a sample of coordination for this purpose.

By describing the stages and their components, it is intended that the study's actual process would be more directed, run more smoothly, and meet the goals set out in the beginning.