

STUDENTS' EXPERIENCES OF MOBILE LEARNING AT AN ISLAMIC HIGH SCHOOL
IN THE NELSON MANDELA BAY DISTRICT IN SOUTH AFRICA

by

Yasin Gül

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SUPERVISORS: PROF. G. VAN DEN BERG

PROF. P.K. MUDAU

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Declaration

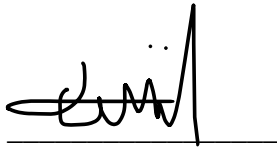
Name: Yasin Gul

Student number: 55932916

Degree: Master of Education in Open Distance Learning (ODL)

Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District in South Africa

I solemnly declare that this mini dissertation is a product of my efforts, and I that have diligently acknowledged and referenced all sources utilised or quoted. Furthermore, I affirm that I have subjected this dissertation to plagiarism detection software, which adheres to the prescribed standards of originality. In addition, I confirm that I have not previously submitted this work, either in its entirety or partially, for assessment at UNISA or at any other institution of higher education in pursuit of another qualification.



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Abstract

The global expansion of mobile learning and its imperative significance may sometimes go unnoticed. This study explored mobile learning at Islamic schools in the Nelson Mandela Bay District of South Africa, focusing on mobile learning experiences, particularly in light of the COVID-19 pandemic. Despite certain regional challenges, the implementation of mobile learning has shown promise. Given the escalating demand for mobile learning and its pivotal role in education, this research concentrated on delineating students' experiences in Islamic schools. It aimed to discern how they perceive the effectiveness of mobile learning, to identify the obstacles the students encounter and, ultimately, to formulate guidelines for educators to enhance the integration of mobile learning in an educational setting.

Employing a qualitative research approach, the investigation in this mini dissertation utilised online surveys/questionnaires with mainly open-ended questions, and semi-structured interviews. A specific Islamic school in the Nelson Mandela Bay region served as the case study, with 12 students participating in the surveys. From these, four students were specifically chosen for follow-up interviews, based on their survey responses and engagement levels. This strategic selection aimed to gather detailed insights from students who could provide diverse and articulate perspectives, thus enhancing the depth and quality of the information.

The study's findings revealed that students in the Islamic school frequently employ mobile devices for learning purposes. They found them considerably more convenient to access information than traditional learning methods, which often require a lot of time and research. The research emphasises the importance of equipping students with comprehensive knowledge on maximising the utility of mobile devices for seamless information access. Furthermore, it advocates for enhanced communication with students and bolstered support services to address challenges in this domain effectively.

Keywords: mobile learning, Islamic high schools, Nelson Mandela Bay District, Technology Acceptance Model (TAM), connectivism, learning theories, open and distance learning (ODL), technology integration, e-learning

Opsomming

Die wêreldwye uitbreiding van mobiele leer en die noodsaaklike betekenis daarvan kan soms onopgemerk verbygaan. Hierdie studie verken mobiele leer by Islamitiese skole in die Nelson Mandelabaai-distrik van Suid-Afrika, met die fokus op mobiele leer-ervarings, veral met die oog op die Covid-19-pandemie. Ten spyte van sekere streeksuitdagings lyk die implementering van mobiele leer belowend. Gegewe die toenemende vraag vir mobiele leer en die deurslaggewende rol daarvan in onderrig, het hierdie navorsing gefokus op die uitbeelding van studente se ervarings in Islamitiese skole. Dit het beoog om te onderskei hoe hulle die doeltreffendheid van mobiele leer ervaar, om die struikelblokke te identifiseer wat die studente teëkom en, eindelik, om riglyne te formuleer vir opvoeders om die integrasie van mobiele leer in 'n opvoedkundige omgewing te bevorder.

Die navorser het gebruik gemaak van 'n kwalitatiewe navorsingsbenadering in hierdie mini-proefskrif, en het aanlyn opnames en vraelyste met hoofsaaklik ope vrae asook halfgestruktureerde onderhoude aangewend. 'n Spesifieke Islamitiese skool in die Nelson Mandelabaai-distrik het gedien as die gevallestudie, met 12 studente wat aan die opnames deelgeneem het. Uit hierdie studente is daar vier gekies vir opvolg-onderhoude, gebaseer op hulle antwoorde van die opname en betrokkenheidsvlakke. Hierdie strategie-keuse is daarop gemik om gedetailleerde insigte by studente te kry wat uiteenlopende en duidelike perspektiewe kan bied, en so die diepte en kwaliteit van die inligting kan bevorder.

Die studie se bevindings het getoon dat studente in die Islamitiese skool dikwels mobiele toestelle gebruik vir leerdoeleindes. Hulle het dit baie meer gerieflik gevind om toegang tot inligting te kry as tradisionele leermetodes, wat dikwels baie tyd en navorsing verg. Die navorsing beklemtoon die belangrikheid daarvan om studente toe te rus met omvattende kennis om die gebruik van mobiele toestelle vir toegang tot inligting te maksimeer. Dit beveel verder ook gevorderde kommunikasie met studente aan asook versterkte ondersteuningsdienste om uitdagings op hierdie gebied doeltreffend te hanteer.

Sleuteltermes: mobiele leer, Islamitiese hoërskole, Nelson Mandelabaai-distrik, tegnologie-aanvaardingsmodel (*TAM*), konnektivisme, leerteorieë, ope en afstandsonderrig (*ODL*), tegnologie-integrasie, e-leer

Okucashuniwe

Kungenzeka kube ukuthi akunakekile ukukhula kwendlela yokufunda usekhaya kanye nokubaluleka kwakho emhlabeni jikelele. Lolu cwaningo luhlola ngokufunda usekhaya ezikoleni zamaSulumane ngaphansi kweSifunda i-*Nelson Mandela Bay* eNingizimu Afrika, ngokugxila ekutheni kunjani ukufunda usekhaya, ikakhulu ngenxa yobhubhane lwe-*COVID-19*. Ngaphezu kwezinsalelo ezithile zesifunda, ukuqaliswa kokufunda usekhaya kubukeka kuthembisa. Ngokubona ukukhula kwesidingo sokufunda usekhaya neqhaza lakho elibalulekile kwezemfundo, lolu cwaningo lugxile ekuthi bazizwa kanjani abafundi ezikoleni zamaSulumane. Inhloso yalokhu ukuthola ukuthi abafundi bakubona kuyimpumelelo yini ukufunda usekhaya, ukuhlonza izinsalelo abafundi abahlangabezana nazo, kanjalo nokuqhamuka nomhlahlandlela wothisha ukuze kuqhanyukwe nendlela ezokwenza kube lula ukufunda usekhaya.

Lapha kusetshenziswe indlela yokucwaninga isimo, uphenyo kulo mbhalo omfushane luhlanganiswe ngenhlobo/uhlu lwemibuzo ku-inthanethi obekuyimibuzo evulelekile, kanye nokuxoxisana kafushane. Ucwaningo lwenziwe ngokusebenzisa isikole esithile samaSulumane esifundeni i-*Nelson Mandela Bay*, kwacelwa abafundi abayi-12 ukuba babambe iqhaza kulolu cwaningo. Ngemuva kwalokhu, kukhethwe abafundi abane kwalandelelwa kubona ngenhlobo, ngokususela ezimpendulweni zabo zocwaningo kanye nezinga lokuzibandakanya. Lokhu kukhethwa bekuhloswe ngakho ukuqoqa imininingwane enzulu kubafundi abahlinzeke ngemibono eyahlukene futhi ecacile, ukuze kuphuculwe iqophelo lwemininingwane etholakele.

Imiphumela yalolu cwaningo iveze ukuthi abafundi besikole samaSulumane bavamise ukusebenzisa amaselula uma befunda. Bawathole efaneleka kakhulu ukufinyelela kulwazi kunokusebenzisa izindlela ezijwayelekile zokufunda, lokhu-ke kudinga isikhathi esiningi kanye nocwaningo. Lolu cwaningo lugcizelela ukubaluleka kokuhlomisa abafundi ngolwazi olubanzi lokukhulisa ukusetshenziswa kwamaselula ukuze bathole ulwazi ngokungenazihibe. Ngaphezu kwalokho, lapha kukhuthazwa ukuxhumana okuphucuzekile nabafundi kanye nezinsiza zokweseka ezinqala ukuze kubhekwane ngempumelelo nezinsalelo ezikhona.

Amagama asemqoka: ukufunda usekhaya, Izikole zamabanga aphezulu zamaSulumane, iSifunda i-*Nelson Mandela Bay*, Uhlelo Lokwamukelwa Kwezobuchwepheshe (*TAM*), ukuhlanganiswa

kwemibono, amatiyori okufunda, ukufunda okuvulelekile usekhaya (*ODL*), ukuhlanganiswa kobuchwepheshe, uhlelo lwe-*e-learning*

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Chapter One: Orientation and Background

1.1 Introduction

The rapid advancement of mobile technology has ushered in a new era of possibilities for education, prompting numerous schools to incorporate mobile devices into their teaching and learning practices (Chen et al., 2015). However, students' experiences with mobile learning can vary greatly, influenced by factors such as their access to technology, prior experience with mobile devices, and the specific educational context in which they find themselves. This chapter introduces the research study, providing an overview of the background, problem formulation, research questions, aim, and objectives. In addition, it presents the theoretical framework and research methodology that will be employed.

Mobile technology has witnessed remarkable progress in recent years, transforming various domains, including education. Its impact can be seen in people's lives, as services have adapted to the widespread use of mobile technology (Osang et al., 2013). The ability of mobile devices to share information has expanded exponentially, evolving from simple devices primarily used for text messages and voice calls to miniature versions of modern-day computers. This evolution has enabled the development of numerous mobile applications which people utilise in their daily activities for identification, entertainment, communication, and learning (Hashemi et al., 2011).

One area particularly relevant to the present research is e-learning. E-learning, primarily utilised on desktop PCs and laptops, has existed for some time. However, with advancements in mobile technology, the necessary computing power to facilitate e-learning platforms has extended to mobile devices, rendering e-learning more accessible through portable means (Radha et al., 2020). This form of learning, often called mobile learning, has gained recognition as a powerful tool for enhancing education outcomes, especially in developing countries (Chigona et al., 2020). Islamic high schools in the Nelson Mandela Bay District (NMBD) of South Africa, with their unique characteristics and challenges, offer an intriguing context to explore the experiences of students with mobile learning. These schools' distinct blend of religious and academic curricula provides a unique lens through which to study the integration and impact of mobile technology in education. The cultural and religious values that permeate these institutions potentially influence how

technology is adopted and utilized, making it an essential area for understanding broader implications of mobile learning within diverse educational settings.

While mobile learning presents opportunities for improved education, successful implementation requires careful consideration of students' perceptions and attitudes towards this approach (Arifianto & Izzudin, 2021). Research has shown that students' attitudes towards mobile learning can be influenced by various factors, including their prior experience with mobile technology, the perceived usefulness of mobile devices for learning, confidence in using technology, age, gender, and beliefs about the role of technology in education (Chigona et al., 2020; Yildirim & Aliefendioğlu, 2020). Furthermore, socioeconomic factors can hinder the utilisation of the strengths of mobile learning and impede educational equity (Cross et al., 2019). Challenges related to technology access and device compatibility can complicate the implementation of mobile learning, particularly in the context of Islamic high schools in NMBD, where students rely on mobile devices such as cell phones and tablets for accessing educational resources and communicating with teachers (Namysova et al., 2019).

The COVID-19 pandemic has further emphasised the prominence of mobile technology in education, empowering students to take greater responsibility for their learning and for accessing essential information easily (Wang et al., 2020). This increased usage necessitates further research to investigate the efficacy of mobile learning and to refine teaching methodologies within such a context. Moreover, considering the cultural and educational backgrounds of students at Islamic schools in the NMBD becomes crucial, as these factors can influence their perception and utilisation of mobile learning significantly.

Therefore, the primary aim of this study was to explore the students' experiences of mobile learning in an Islamic high school in the NMBD. Specifically, the study examined students' perceptions of mobile learning and investigated the mobile technology. By examining these aspects, this research aims to shed light on the details and potential of mobile learning in an Islamic school setting, contributing to the advancement of educational practices and enhancing students' educational experiences.

1.2 Background

The research focuses on the experiences of students with mobile learning in an Islamic high school located in the NMBD in South Africa. In the Nelson Mandela Bay District, where there are two Islamic schools, mobile learning has been recognised as a powerful tool for enhancing educational outcomes, particularly in developing countries (Chigona et al., 2020). These Islamic schools have also acknowledged the potential benefits of mobile learning (Lal, 2011). However, successful implementation of mobile learning requires understanding of students' perceptions and attitudes towards this approach (Al-Dahshan & Younis, 2009). Previous research has highlighted the influence of various factors on students' attitudes, including their prior experience with mobile technology, the perceived usefulness of mobile devices for learning, confidence in using technology, age, gender, and beliefs about the role of technology in education (Chigona et al., 2020; Yildirim & Aliefendioğlu, 2020). Furthermore, socioeconomic factors can hinder the utilisation of the strengths of mobile learning, thus impacting educational equity (Mncube, 2022). In the specific context of the NMBD's Islamic high schools, mobile devices such as cell phones and tablets play a crucial role in students' education (Al-Shamrani & Abdullah, 2013). These devices enable them to access educational resources and to communicate with their teachers. The COVID-19 pandemic further emphasised the significance of mobile technology in education, as it allowed students to take greater responsibility for their learning and to access necessary information easily (Wang et al., 2020). Given the increased usage of mobile devices, it is essential to conduct further research to investigate the effectiveness of mobile learning and to refine teaching methodologies in this specific context.

Islamic high schools located in the NMBD are essential institutions in the community. Situated in the suburb of Malabar, where the Muslim population is significant, these schools serve the Muslim community and a small number of non-Muslim students. The schools cater to male and female students between 13 and 18, providing an inclusive and multicultural environment. Their establishment arose from the demand of people from an Islamic background who sought an education within an Islamic environment and culture.

By intertwining the research focus on mobile learning within the context of Islamic high schools in the NMBD region, a comprehensive understanding emerges regarding the significance of mobile technology in this particular educational setting.

1.3 Problem Formulation

The study aims to address a critical gap in the existing literature by investigating the perceptions and attitudes of Muslim high school students in Islamic schools within the NMBD towards mobile learning. While previous research has been conducted on mobile learning in the context of Islamic schools (Mohd Nawi & Hamzah, 2014), it is essential to note that these studies may not necessarily represent the South African Muslim student population, particularly those within the NMBD. Although the students in those studies and those attending Islamic high schools in the NMBD share the same religion, it is essential to recognise that cultural and socioeconomic factors may vary (Sarker et al., 2019). Therefore, there is a need to investigate the perceptions and experiences of Muslim high school students, specifically in the NMBD Islamic schools, regarding mobile learning. This study is necessary to gain insights into the unique perspectives and challenges that Muslim high school students face in the NMBD Islamic schools when utilising mobile learning. By understanding their perceptions, the study explores the experiences of students with mobile learning in Islamic high schools in the NMBD. It is crucial to fill the gap in knowledge about how mobile learning impacts students' educational experiences in the NMBD context, where cultural and socioeconomic factors may differ from those of previous studies (Schwartz, 2021).

The absence of representative studies on the perceptions of Muslim high school students in the NMBD Islamic schools underscores the need for this research. It is crucial to gather empirical evidence that addresses the context and experiences of these students specifically, providing a foundation for informed decision-making and the effective implementation of mobile learning strategies (Huang et al., 2016). Problematizing the study, the researcher can articulate the rationale and significance of investigating the perceptions and attitudes of Muslim students in NMBD Islamic schools towards mobile learning. In addition to that, understanding how mobile learning influences the educational experiences of Muslim high school students in the NMBD can contribute to bridging the digital divide and to promoting educational equity. This entails identifying potential challenges and opportunities associated with mobile learning in this context, allowing educators and policymakers to make informed decisions to enhance educational practices and to ensure that all students have equal access to quality education (Ramadhan & Albaekani, 2021) This study seeks, eventually, to address the gap in the literature by investigating the perceptions and attitudes of Muslim high school students in Islamic schools within the NMBD towards mobile learning. By exploring their unique perspectives, challenges, and experiences, this

research aims to contribute to developing effective teaching methodologies relevant to the 21st century and to promote educational equity in the context of mobile learning.

1.4 Research Question

Based on the research problem statement of the study, the following main research question has been formulated:

What are the experiences of students towards mobile learning in Islamic high schools in the NMBD?

From the main question, the following sub-questions are stated:

1. How do students at Islamic high schools in the NMBD use mobile devices for learning?
2. How do students at these schools perceive the effectiveness of mobile learning in comparison to traditional classroom learning?
3. What challenges do students face when using mobile technology?
4. What do students perceive as the benefits of using mobile learning?
5. What guidelines can teachers follow to ensure adequate and fair implementation of mobile learning in these schools?

1.5 Aim of the Research

Based on the research questions, the aim of the study is formulated as follows:

This study aims to explore the experiences of students with mobile learning in Islamic high schools in the NMBD.

The specific objectives of the proposed study are:

1. To determine how students use mobile devices for learning.
2. To determine how students at these schools perceive the usefulness of mobile learning in comparison to traditional classroom learning.
3. To investigate the challenges students face when using mobile technology.

4. To investigate what students perceive as the benefits of using mobile learning.
5. To develop guidelines for the adequate and fair implementation of mobile learning in these schools.

1.6 Theoretical Framework

A theoretical framework is a crucial component of educational research as it provides a set of concepts, ideas, and assumptions that guide the research process and offer a lens through which data can be interpreted (Creswell, 2013). In the context of this study, the theoretical framework that combines the technology acceptance model (TAM) and connectivism can provide a comprehensive understanding of the factors that influence students' mobile learning experiences at Islamic high schools in the NMBD in South Africa.

The technology acceptance model (TAM) proposes that technology acceptance and usage are influenced by two primary factors: perceived usefulness and perceived ease of use (Davis, 1989). Within mobile learning, perceived usefulness refers to the extent to which students believe that mobile devices are beneficial for their learning endeavours, while perceived ease of use pertains to students' perceptions of the user-friendliness and ease of utilising mobile devices. Previous research has demonstrated consistently that perceived usefulness and perceived ease of use are significant predictors of mobile learning adoption (Sung & Mayer, 2012; Wu et al., 2013).

Connectivism, on the other hand, is a learning theory that emphasises the role of networks and connections in the learning process (Siemens, 2005). In the context of mobile learning, connectivism allows researchers to explore how students establish connections with peers, teachers, and other learning resources through their mobile devices. It has been found that students use mobile devices extensively to connect with online learning resources and to engage in collaborative activities with their peers and teachers (Kearney et al., 2012; Kirschner & Karpinski, 2010). The framework enables researchers to explore the complex interactions and dynamics within the mobile learning process. It helps to identify strategies to improve students' mobile learning experiences, such as enhancing perceived usefulness and ease of use of mobile devices, fostering connections and collaborations, and leveraging the potential of mobile technology in educational settings.

The theoretical framework is discussed in detail in Chapter 2, Section 2.2.

1.7 Research Design

The research design plays a crucial role as the overarching framework that guides the overall approach and structure of the study. It provides a systematic plan that outlines the procedures and methods for data collection, analysis, and interpretation, ensuring the study's rigour and validity (Dannels, 2018).

By following a well-constructed research design, researchers can ensure that the study addresses the research questions and objectives effectively. It establishes a clear roadmap for the entire research process, providing a step-by-step plan for gathering, analysing, and interpreting data (Creswell, 2013).

The following sub-headings will be covered within the research design:

1.7.1. Research Paradigm

A research paradigm refers to a set of beliefs, assumptions, and values that shape the researcher's worldview and guides their approach to knowledge generation (Creswell, 2013). The main research paradigms encompass positivist, post-positivist, interpretative, constructivist, transformative, critical, and pragmatic paradigms (Johnson & Christensen, 2020).

For this study, an interpretive approach was employed to investigate students' experiences with mobile learning in Islamic schools within the NMBD. The aim was to understand the individual and shared social meanings that shape their experiences with mobile learning and to identify factors that might influence their perceptions. The interpretive approach is a research paradigm emphasising comprehending human behaviour and social phenomena within their cultural, historical, and subjective contexts. Interpretivists argue that social reality is constructed through socially and culturally situated language, symbols, and meanings, and that research should focus on capturing the subjective experiences and perspectives of individuals and groups.

Denzin and Lincoln (2011) state that "interpretive research is concerned with meaning – how people make sense of their lives, experiences, and complex social worlds. It assumes that people have multiple realities and that researchers must explore these from multiple perspectives". Chen et al. (2008) also suggest that a research paradigm offers a lens for understanding and explaining social phenomena based on specific theoretical perspectives. Hence, this research project has

adopted the interpretive research paradigm to guide the selection of research questions, approach, and data collection methods. This paradigm underscores the subjective and contextual nature of reality and aims to uncover the meanings and interpretations individuals assign to their experiences.

This study was conducted within the interpretive paradigm to comprehend and interpret the perspectives of students and teachers regarding mobile learning and the insights that could be gained. The characteristics of interpretivism employed in this study include the purpose of the research, the ontology, the epistemology, and the methodology utilised to guide the collection, analysis, and interpretation of data (Kamal, 2019).

1.7.2 Approach

The selected approach for this study is qualitative. When conducting educational research, several approaches exist, such as qualitative, quantitative, and mixed methods. The choice of methodology is driven by the research questions and informed by the relevant literature (Dawadi et al., 2021). In this study, a qualitative approach was employed to explore the experiences of students and teachers in Islamic high schools in the NMBD concerning mobile learning.

Qualitative research aims to uncover the meanings that individuals attribute to their experiences and actions and seeks to develop a detailed understanding of the phenomenon under investigation (Creswell, 2013). This method is particularly suited to exploring complex social phenomena, such as mobile learning experiences, within the context of Islamic education.

One of the key strengths of qualitative research is its ability to gather in-depth and detailed information from participants, leading to rich insights and understanding (Nieuwenhuis, 2007). However, it is essential to be aware of potential weaknesses, such as the risk of biased findings when working with a small group of participants (Cormack, 1991). To address these risks, the researcher must maintain objectivity and minimise potential influence on the participants during data collection and analysis (Taguchi, 2018).

The main objective of this study is to explore the perspectives and experiences of students in Islamic high schools in the NMBD regarding mobile learning. By using a qualitative approach, the researcher aims to gain a comprehensive understanding of the phenomenon under investigation

and to uncover valuable insights that could contribute to the improvement of mobile learning in the context of Islamic education.

1.7.3 Type

This study aimed to use a case study approach, which enables researchers to collect and analyse data within a specific context or occurrence (Aliyyah et al., 2020). According to Mishra and Alok (2022), case studies provide a complete description of a real-life case, such as individuals within a school community or institution. This research method is highly adaptable and flexible, as mentioned by Collins and Stockton (2018). Lawrence et al. (2022) emphasise that case studies offer a comprehensive and multifaceted understanding of complex subjects within their real-world settings. They further assert that case studies are employed widely across various fields Lawrence et al. (2022)

In this study, the chosen case involved students currently enrolled in one of the Islamic schools within the NMBD, with the researcher concurrently serving as their instructor during the research period. The decision to concentrate on students from Islamic schools in the NMBD was guided by the researcher's unique experience of teaching them. This instructional involvement included both fully online teaching during the COVID-19 pandemic and ongoing engagement in a blended mode of face-to-face and online instruction. Despite the researcher's teaching role, objectivity in the research process was maintained diligently through the implementation of rigorous methodological practices, ensuring unbiased data collection, analysis, and interpretation.

1.8 Research Methods

As defined by Carcary (2020), research methods encompass systematic techniques employed to address research problems. They enable researchers to gather, organise, and analyse relevant material, engage in fieldwork when necessary, and use specific data collection techniques such as questionnaires and controlled experiments. In addition, research methods facilitate the recording, sorting, and interpreting of evidence.

In the present study, various research methods were employed to gain a comprehensive understanding of Students' experiences of mobile learning at Islamic high schools in the NMBD in South Africa' (Trochim & Donnelly, 2008, pp. 56-65). These methods encompassed selecting

participants, sampling strategies, data collection techniques, and data analysis procedures. Using these methods, the research aimed to acquire in-depth knowledge and insights into students' experiences regarding mobile learning in Islamic high schools.

1.8.1 Selection of Participants and Sampling

Sampling is the process of selecting a subset of individuals from a larger population for research purposes, as stated by Farrugia (2019). The objective of sampling is to ensure that the chosen subset represents the larger population accurately, enabling the generalisation of study findings to the entire population. Two primary sampling methods are commonly employed: probability sampling, involving the random selection of participants, and non-probability sampling, which uses non-random techniques like convenience or purposive sampling Osborne (2014).

For this study, a combination of purposive and convenience sampling was used. The researcher selected participants who were willing to take part in the study and are currently enrolled in an Islamic high school in the district. Typically, high school students range in age from 13 to 18 years. In cases where participants are under 18 years old, parental consent was obtained. The study involved a diverse group of students with experience in mobile learning. Specific selection criteria were established to ensure the representativeness of the sample in relation to the larger population. For this study, a total of 12 participants were selected from an Islamic high school in the NMBD region. The participants were chosen to ensure diversity, with two males and two females from each of the three grades (Grade 10, Grade 11, and Grade 12), aged 15, 16, and 17, respectively.

Once the participants were selected, the research methodology involved initial surveys and interviews to understand each participant's prior experience with mobile technology in education. Observations were made during regular school activities where mobile learning was integrated, noting how students interacted with technology and its use in different educational contexts within the school. Follow-up interviews were conducted to capture any changes in perception or challenges faced by the students, providing them with an opportunity to offer suggestions for improving mobile learning practices.

All participants shared an Islamic background, with one male and one female originally not from South Africa, while the remaining participants were South African citizens by birth.

The researcher specifically targeted participants from the Further Education and Training (FET) phase owing to their familiarity with mobile learning. During the COVID-19 pandemic, they had experienced fully online classes, and most of them preferred using their mobile phones for learning.

The decision to include two participants from each grade, resulting in a total of 12 participants, was guided by established research practices suggesting that a sample size between 10 and 50 is generally sufficient for qualitative studies to achieve depth without compromising manageability (Opie, 2019). This balance allows for comprehensive data collection and analysis, ensuring that the study remains both detailed and focused. Selecting two participants per grade enabled the study to capture a broad range of experiences and perspectives across different stages of the secondary education cycle, enhancing the study's representativeness within the school's demographic structure.

To uphold the integrity of the research despite personal acquaintance with the participants, the researcher took meticulous steps to maintain objectivity and professionalism. Instead of relying on personal contacts or informal channels, the researcher accessed the participants' details through the school's official database system. This process involved formal communication with the school's administration to ensure that the selection was impartial and aligned with ethical research standards. By leveraging the official database, the researcher could systematically select participants based on the study's predefined criteria, thus avoiding any potential bias that might arise from personal acquaintance. This method not only reinforced the transparency of the research process but also solidified the trustworthiness of the data collected.

1.8.2 Data Collection

According to Mkandawire (2019), data collection methods and the collected data are integral components of research. Qualitative research utilises various methods, including interviews, observations, textual analysis, focus groups, applied ethnography, visual approaches, and document analysis (Leko et al., 2021). In this study, a qualitative survey or questionnaire and semi-structured interviews were employed as a feedback mechanism, using open-ended questions to obtain detailed information.

1.8.2.1 Surveys with Open-ended Questions

The use of surveys or questionnaires in this study was deemed appropriate for several reasons. First, they are known for their efficiency and affordability. Conducting surveys is a cost-effective way to gather data from a relatively large number of participants without incurring significant expense. This was beneficial, especially considering the study's limited resources.

According to Creswell and Creswell (2018, pp.181) surveys with open-ended questions are an efficient and inexpensive way to collect data from people. (Creswell, 2013, pp.163-168). also notes that surveys are a cost-effective way to collect data from people, and that they can be used to gather information on a wide range of topics. Moreover, surveys and questionnaires offer convenience to both the participants and the researchers. Participants can complete the survey easily at their own pace and preferred time, reducing the burden of scheduling individual interviews or focus groups. For researchers, distributing and collecting surveys can be done efficiently, allowing for improved response rates compared to other data collection methods. The choice of surveys also enhances accessibility across devices. Participants can access and complete surveys on various devices, such as smartphones, tablets, or computers. This flexibility increases the likelihood of participation from a diverse group of students who might have different technological preferences.

Taherdoost (2019) highlights mobile surveys as a convenient and accessible option for participants, especially those without computer access. Fraser et al. (2018) underscore the crucial role of accessibility in ensuring equal participation and contribution in survey research. In addition to the benefits of open-ended questions, it is essential to acknowledge their limitations as well. The challenges typically stem from the potential complexity in analysing and categorising a wide range of open-ended responses. The inherent richness of qualitative data poses difficulties in quantification and may introduce subjectivity into the interpretation process. To mitigate these challenges, the researcher employed a strong coding system and leveraged qualitative analysis software, ensuring a systematic and objective approach to managing open-ended data (Berg et al., 2019)

1.8.1.2 Interviews

Apart from using surveys, semi-structured interviews were used in this research. Researchers, such as (Gill et al., 2008), emphasise the significance of interviews in qualitative studies for exploring complex phenomena and capturing participants' perspectives in depth. The semi-structured

interview approach, as advocated by these scholars, aligns with the aim of the research to uncover nuanced insights into students' motivations, engagement, and the impact of mobile technology on learning outcomes.

The semi-structured interviews, conducted alongside surveys, offered a valuable opportunity to find out more about participants' experiences. This aligns with the view of Creswell (2013), who highlights that combining different data collection methods enhances the credibility and validity of qualitative research. By employing semi-structured interviews, this study was able to gain a comprehensive understanding of the subject matter, as noted by (Doyle, 2019) in his work on in-depth interviewing.

The semi-structured format of the interviews facilitated open-ended discussions, enabling participants to share their perspectives in their own words. This approach is consistent with the recommendations of Bhattacharjee (2012, p.78), who emphasises that open-ended questions foster richer and more insightful responses. By adopting this approach, the research ensured a richer examination of the research topic, in line with the qualitative research principles discussed by Denzin and Lincoln (2018) in their seminal work on qualitative inquiry.

In this study, the approach to data collection involved conducting semi-structured interviews with a selectively targeted subset of students. This subset consisted of four students: two from Grade 11 and two from Grade 12. To ensure a balanced representation, one male and one female student were chosen from each of these grades. These four students were not randomly selected but were specifically chosen from the initial larger group of 12 students who had previously participated in the surveys. This selection was based on their distinct perspectives and responses during the initial survey phase, which indicated that they could provide deeper and more nuanced insights into the research questions. The decision to focus on students from the upper grades was driven by the assumption that these students would have more experience and potentially more sophisticated views on mobile learning, which could enrich the findings of the study. In this research, the method of open-ended questionnaires was adopted first, followed by the utilisation of semi-structured interviews to fortify research reliability. Mortensen (2020). recommends this triangulation approach, emphasising its capacity to enhance the credibility of findings through the integration of multiple data sources. The decision to use Zoom for interviews was based on participant convenience and aligned schedules, in line with the methodology proposed by (Creswell, 2013, p.

97), which prioritises purposeful sampling for obtaining diverse insights. The determination of the sample size followed the approach of data saturation, ensuring comprehensive information gathering to address the research queries effectively (McLaughlin, 2016). The decision to start with open-ended questionnaires in this research was driven by their ability to gather diverse and comprehensive responses, allowing participants to express their thoughts more freely. This initial phase aimed to establish a broad understanding of participants' perspectives, providing a foundation for more targeted and detailed exploration in the subsequent semi-structured interviews.

1.8.3 Data Analysis

In qualitative research, establishing a seamless connection between the research problem, objectives, data collection techniques, and subsequent analysis is paramount. In this study, the researcher employed thematic analysis.

Thematic analysis, defined as “a method for identifying, analyzing, and elucidating patterns within data” (Braun & Clarke, 2006, p.79), was utilised to explore the perspectives of learners in Islamic high schools. The focus centred on students in the NMBD region attending Islamic schools, aiming to glean insights into their encounters with mobile learning, particularly within the context of Islamic education in the area, thereby adding nuanced depth to the investigated topic.

To dissect and interpret the collected information, the researcher employed thematic analysis, aligning with the approach advocated by De Vos (2005). This method facilitated the identification, evaluation, and structuring of themes derived from participants' responses, enriching the analysis process. The analysis will be explained in depth in Chapter 3, Section 3.6.

1.9 Ethical Considerations

According to Markham and Buchanan (2015), ethical considerations play an integral role in the researcher's journey, encompassing the assessment of factors that are feasible, equitable, and just within the specific research context. When delving into the realm of ethics, (Resnik, 2020). advocate for the utmost respect towards research participants, ensuring their protection from harm

and obtaining their fully informed consent prior to any research endeavour. To adhere to these ethical principles, the researcher sought approval from the ethics committee before initiating the study. Ethical clearance was obtained from the College of Education at UNISA, following a thorough review of the university's ethics policy and guidelines, which provided valuable insights into the ethical treatment of human participants, particularly in the context of mobile learning research (see Appendix H, Ethics Clearance).

The significance of ethics committees in this process cannot be understated, as they possess the authority to approve, reject, or suspend studies, and may require modifications to research protocols, as emphasised by the World Health Organization (WHO, 2009, p.11).

The researcher sought permission from one school to conduct the research and extended invitations to potential participants, who were asked to provide both verbal and written consent. (See Appendix C, Consent letter and Appendix D, Assent letter). Prior to their involvement in the study, all individuals received comprehensive information about the research purpose, procedures, potential risks, benefits, and their rights as participants. Informed consent was an essential component of the research process, granting participants the freedom to withdraw from the study at any point without facing adverse consequences.

To protect participant confidentiality, the researcher ensured that the privacy and anonymity of individuals were maintained rigorously. Personal information collected during the study was treated with the utmost confidentiality and stored securely, guaranteeing that participant identities remained anonymous and unattributable to their responses and data.

To further prioritise the well-being of participants, measures were implemented to minimise any potential physical, psychological, or emotional harm. Research activities were conducted with a strong emphasis on safety and sensitivity to cultural, social, and personal backgrounds, ensuring that participants were not subjected to distress or discomfort.

1.10 Trustworthiness

Trustworthiness is an important consideration in research to ensure the reliability and validity of the findings. In quantitative research, reliability refers to the consistency and stability of measurements, while validity refers to the accuracy and appropriateness of the research methods in measuring what they are intended to measure Devault (2019). In qualitative research, different

criteria are used to assess trustworthiness, including transferability (the extent to which the findings can be applied to other contexts), credibility (the believability and authenticity of the findings), dependability (the consistency and stability of the findings over time), and confirmability (the objectivity and neutrality of the findings) (Korstjens & Moser, 2018). These criteria ensure the rigour and quality of the research, enhancing the trustworthiness of the results.

Trustworthiness, as highlighted by Lincoln et al. (1985), holds significant importance in qualitative research, ensuring that the research findings are meaningful and deserving of the researcher's attention.

1.11 Clarification of Concepts

Clarification of concepts in Chapter One is important to establish a common understanding of key terms and ideas used throughout the study. This section provides clear definitions and explanations of important concepts related to the research topic. Through clarifying concepts, the reader will have a solid foundation to comprehend the subsequent chapters and the overall research study.

Mobile learning: According to Koole (2009), Mobile learning refers to the use of portable and mobile digital devices, such as smartphones and tablets, to access, create, and share learning content.

Nelson Mandela Bay district: It is also important to define the geographic area being studied. According to the Nelson Mandela Bay Municipality (2020), "Nelson Mandela Bay is a metropolitan area located in the Eastern Cape province of South Africa". It encompasses the city of Gqeberha (formally Port Elizabeth), the nearby towns of Uitenhage and Despatch, and the surrounding rural area.

Connectivism: Connectivism is a contemporary learning theory which underscores the paramount importance of connections and networks in the learning process, particularly accentuating the pivotal roles played by technology and social interactions in the acquisition and dissemination of knowledge (Siemens, 2005). This theoretical framework aligns with the emphasis of the digital age on interconnectedness, where learning transcends traditional boundaries and is shaped by dynamic interactions with information and peers (Duke et al., 2013, p.6). The integration of technology, particularly through online platforms and social media, has provided students with unprecedented opportunities to engage with diverse sources of information and to collaborate with

global communities (Kop & Hill, 2008, pp. 1-13) This perspective resonates with contemporary discourse, where learning is acknowledged as a networked endeavour which thrives on the multifaceted connections between students, resources, and technology (Downes, 2010; Siemens, 2005)

TAM: The technology acceptance model (TAM), developed by Davis (1989), stands as a foundational framework for comprehending user acceptance and adoption of new technologies. TAM posits that perceived usefulness and perceived ease of use are pivotal in shaping user attitudes and intentions towards specific technologies, reflecting users' beliefs in the ability of a technology to enhance performance, and in its accessibility and learnability. Both factors directly influence user attitudes, intentions, and actual usage of the technology (Davis, 1989). The resilience and applicability of TAM are evident across diverse domains, including the workplace and education (Charness & Boot, 2010), highlighting its significance in understanding technology integration and diffusion. This theoretical framework, supported by a wealth of empirical evidence, provides valuable insights into the acceptance and adoption of new technologies by users, making it a cornerstone for comprehending technology dynamics across various contexts.

1.12 Division of Chapters

The division of chapters refers to the organisation and structure of the dissertation. This section outlines how the chapters are divided and the main topics or themes that are covered in each chapter of this mini dissertation. It provides a roadmap for the reader, allowing them to navigate the document and to locate specific information easily. The division of chapters should be logical and coherent, ensuring that the content flows smoothly and follows a clear progression of ideas.

Chapter 1: Introduction

The introductory chapter of this research presents an overview of the study, encompassing the research topic, research questions, and research objectives. In addition, the chapter discusses key aspects such as the research technique and design, conceptual explanations, and the organisation

of subsequent chapters. Moreover, brief considerations are given to trustworthiness and ethical aspects of the study.

Chapter 2: Literature Review and Theoretical Framework

After conducting a thorough review of the literature, the researcher explores the prevalence of mobile learning and online learning in the 21st century. The latter half of the chapter focuses on an in-depth discussion of the concepts underlying the theoretical framework. Specifically, the chapter delves into the elucidation of how learning takes place within the context of mobile learning, with particular attention given to the selection and utilisation of connectivism and the technology acceptance model.

Chapter 3: Research Methodology

In this chapter, the research design and methodology employed to collect and analyse data were described. The focus is on the sampling strategy, data collection methods, and data analysis techniques utilised in the study. It provides an explanation of how the research was conducted and how the findings were obtained. Furthermore, the chapter addresses the aspects of trustworthiness and ethical considerations pertaining to the study.

Chapter 4: Data Analysis and Interpretation

In this chapter, the study's findings are presented with the researcher's interpretation, aligned with relevant theories and literature, while maintaining an objective presentation. The data is presented in a concise and understandable format, utilising tables, graphs, and other visual aids. In addition, this chapter analyses the results obtained from the study critically by comparing them with the existing literature and identifying any novel conclusions or insights that have emerged.

Chapter 5: Summary, Conclusions and Recommendations

In the concluding chapter, a succinct summary of the primary findings is presented, elucidating their contributions to the current understanding of the research topic. The literature and empirical research are synthesised comprehensively, and the research questions are addressed. The potential limitations of the study are highlighted, paving the way for future investigations. Suggestions for future research are articulated, identifying areas that warrant further exploration. The chapter also highlights the practical implications of the study, accompanied by recommendations for potential

gateways for future research. Ultimately, this chapter offers a comprehensive conclusion to the study, underscoring its significance and encapsulating its key outcomes.

1.13 Conclusion

This chapter introduced the topic of determining students' experiences of mobile learning in Islamic high schools within the Nelson Mandela Bay district of South Africa. It presented an exploration of the problem, research questions, and research objectives, providing a clear understanding of the study's focus. In addition, the chapter delved into the research topic, questions, methodology, and the vital aspects of reliability and ethical considerations. It offered a thorough explanation of key topics relevant to the study. Furthermore, the introductory chapter provided a concise plan of action. The subsequent chapter covers the theoretical foundations and pertinent literature that underpin the study, expanding further on the concepts employed in the research.

In the following chapters, I explore the theoretical framework that underpins this study, discuss the relevant theories as part of the literature review as policies inform practice, outline the research methodology employed, and present the findings and analysis derived from the data collected. By understanding the multifaceted nature of mobile learning experiences and their impact on students, this research seeks to inform educational stakeholders, policymakers, and practitioners about the significance of incorporating mobile technology effectively in Islamic high schools, ultimately enhancing the quality of education and fostering positive learning outcomes.

Chapter Two: Theoretical Framework and Literature Review

2.1 Introduction

In the previous chapter, an overview of the study was provided, including the introduction, background, research problem, primary question, sub-questions, and a brief description of the research methods employed. Building upon this foundation, this chapter aims to examine an integrated theoretical framework and literature review. The purpose of this chapter is to review relevant literature, learning theories, and open and distance learning (ODL) theories that elucidate students' experiences of mobile learning in Islamic high schools in the Nelson Mandela Bay district of South Africa. Furthermore, this chapter discusses educational challenges and experiences that are crucial to the study as they contribute to the understanding of theory and practice. By identifying the current gaps in the field, the study ensures that the investigation of the phenomenon under inquiry is relevant, important, and beneficial. The technology acceptance model (TAM) and connectivism serve as the foundation for this research and will be discussed in detail.

This study also helps to gain a comprehensive understanding of students' experiences with mobile learning in an Islamic high school in the Nelson Mandela Bay district of South Africa. To achieve this, both the technology acceptance model and connectivism are employed, shedding light on the factors that influence students' perceptions, acceptance, and adoption of mobile learning. The study also explores the significance of networks and connections in shaping their learning experiences. By utilising this approach, researchers can gain deeper insights into the intricate dynamics of mobile learning, ultimately identifying effective strategies to enhance students' mobile learning experiences.

In order to ensure the relevance, significance, and potential benefits of the study, this chapter identifies the gaps in the current literature, drawing upon relevant research (Kivunja, 2018).

2.2 Theoretical Framework

A theoretical framework serves as the structure that supports and introduces a theory in relation to the research problem (Kivunja, 2018). It demonstrates an understanding of relevant theories and concepts in the research field (Kivunja, 2018).

In Chapter 1, Section 1.6, connectivism and the technology acceptance model (TAM) are highlighted for their extensive application in diverse research inquiries exploring mobile learning and its impact on educational outcomes (Mattar, 2010). This study is grounded in two foundational theories which are connectivism and TAM. Connectivism emphasises the significance of networks and connections in the learning process, investigating how students establish connections with peers, teachers, and learning resources through mobile devices (Siemens & Downes, 2015). Previous studies have demonstrated that students use mobile devices to connect with online learning resources and engage in collaborative activities with peers and teachers (Kearney et al., 2012; Kirschner & Karpinski, 2010). By incorporating connectivism and TAM, this study aims to explore factors influencing students' perceptions, acceptance, and adoption of mobile learning while elucidating the role of networks and connections in shaping their learning experiences. The goal is to gain deeper insights into the complex dynamics of mobile learning and identify effective strategies to enhance students' mobile learning experiences.

TAM, developed by Davis (1989), posits that users' acceptance and usage of technology are shaped by perceived usefulness and perceived ease of use. In the context of mobile learning, perceived usefulness pertains to students' beliefs about the utility of mobile devices for learning, while perceived ease of use relates to their perceptions of user-friendliness and ease of employing mobile devices. Extensive research has consistently identified these factors as crucial predictors of mobile learning adoption (Davis, 1989; Sung & Mayer, 2012; Wu et al., 2013).

In the following sections, the researcher will examine TAM and connectivism, both crucial theories for this study, offering valuable insights into the mobile learning experiences on student outcomes.

2.2.1 Connectivism

Connectivism, a learning theory emphasising networks and connections in the learning process, was first proposed by George Siemens (Siemens, 2005). This theory highlights the distributed nature of knowledge across people, resources, and technology, urging students to engage with diverse sources of information and to collaborate with others to enhance their learning experiences. It underscores the need for continuous learning and adaptability in a rapidly changing world, where information access and evaluation are essential skills (Siemens, 2005). Connectivism, rooted in

advancements in technology and the rapid dissemination of information through the internet, emphasises the importance of creating a collaborative learning environment where students can interact and participate in a social context (Boyraz & Ocak, 2021; Siemens, 2005). The connectivist theory provides a solid foundation for the exploration of connectivism and its application to mobile learning, particularly regarding students' connections with peers, teachers, and learning resources through their mobile devices (Kearney et al., 2012; Kirschner & Karpinski, 2010).

The connectivist theory was chosen as the most suitable learning theory for this study as it provides a valuable basis for understanding the impact of mobile learning during the COVID-19 pandemic at the Islamic high schools in the Nelson Mandela Bay district. Connectivism recognises students as active agents in their own learning processes and aligns well with technological advancements (Downes, 2008; Siemens, 2005). It draws from sociocultural and traditional learning theories, emphasising the navigation of knowledge through networks (Bell, 2011; Glassner & Back, 2020). This approach allows for a holistic understanding of students' engagement with mobile learning, incorporating both contemporary technological aspects and the sociocultural context of the learning environment. Connectivism highlights the transformative role of internet technologies in expanding learning opportunities and information sharing (Siemens & Downes, 2015). This theory is particularly relevant in the context of the COVID-19 pandemic, where face-to-face learning was replaced by online platforms, enabling students to share information and interact with peers, with teachers serving as facilitators. Connectivism sheds light on how internet technologies contribute to new forms of learning and helps to identify tools available to support e-learning platforms (Zawacki-Richter & Anderson, 2014).

While connectivism offers valuable insights into modern learning dynamics, it is not without critique. Some scholars have raised concerns regarding the theory's emphasis on networked learning to the detriment of individual cognitive processes and the role of experts (Kop & Hill, 2008). In addition, the scope of the applicability of connectivism has been questioned, with critics arguing that it might be better suited for informal learning settings rather than for formal educational institutions (Tham et al., 2021). These critiques remind us that, while connectivism offers a compelling perspective, its limitations and contextual suitability warrant consideration.

2.2.2 Technology Acceptance Model (TAM)

The technology acceptance model (TAM), initially proposed by Fred D. Davis in 1986 (Davis, 1986), is a prominent framework for studying users' acceptance and adoption of new technologies. Davis's pioneering work has influenced extensive research on user attitudes and behaviours towards technology (Brown et al., 2002). TAM has since evolved and became a cornerstone in the field of technology acceptance and user behaviour studies (Cheung & Vogel, 2013)

The technology acceptance model (TAM) proposes that the acceptance and usage of technology are influenced by perceived usefulness and perceived ease of use (Davis, 1989). Perceived usefulness refers to the belief of students in the utility of mobile devices for learning, while perceived ease of use pertains to their perception of user-friendliness and ease of using mobile devices. Previous studies have found that perceived usefulness and perceived ease of use are significant predictors of mobile learning adoption (Sung & Mayer, 2012; Wu et al., 2013).

While TAM has gained significant traction in understanding technology adoption, it has also faced criticisms and limitations. One notable critique revolves around TAM's focus on cognitive and utilitarian aspects, neglecting social and contextual factors that play a role in technology adoption (Cheung & Vogel, 2013). Moreover, TAM's simplicity has led to calls for its expansion to incorporate additional variables to provide a more comprehensive understanding of technology acceptance (Cheung & Vogel, 2013). It is important to recognise that, while TAM offers valuable insights, its scope and applicability need to be interpreted within the context of specific technologies and user populations.

The theoretical framework for the study is informed by the technology acceptance model (TAM) and connectivism. These theories help researchers to understand how students perceive the usefulness and ease of use of mobile devices for learning, as well as their connections with peers, teachers, and learning resources through mobile devices. By employing both connectivism and the technology acceptance model (TAM), researchers can gain a comprehensive understanding of the factors influencing mobile learning experiences and identify strategies to improve mobile learning outcomes. Understanding these multifaceted frameworks not only informs how students engage with mobile devices but also underscores the critical role of educational policies in shaping the integration and efficacy of mobile learning within academic settings (Davis, 1986; Siemens, 2004),

such as policies governing device accessibility and usage guidelines, which can impact students' engagement with mobile learning tools significantly.

2.3 Educational Policies and Their Roles for the Implementation of Mobile Learning

Policy and practice play a vital role in facilitating effective knowledge transfer and influencing appropriate actions (Dale et al., 2019). However, differences in knowledge, communication, experiences, and skills can sometimes obscure the scientific basis when policies or practices focus solely on achieving specific goals. Ramaahlo et al. (2018) define policy as explicit or implicit decisions that provide instructions for future actions, initiate, or delay action, or guide the implementation of past decisions.

Educational policy and practice play fundamental roles in fostering quality education and shaping students' learning experiences Noble and Smith (2018:35) Understanding the factors that influence students' acceptance and adoption of technology in education helps educators and policymakers to make informed decisions and to create a conducive learning environment that maximises students' learning potential and engagement. By integrating the principles of these frameworks into educational practices, institutions can strive to optimise mobile learning experiences and achieve positive learning outcomes for students.

In South Africa, educational policy has undergone significant transformations to ensure equitable access to education and to promote inclusivity. One area of advancement that holds great promise is the integration of mobile learning. This research examines the current state of educational policy in South Africa, with a focus on the opportunities and challenges presented by mobile learning. By addressing the identified challenges and embracing mobile learning, South Africa can further enhance its educational landscape and provide quality education to all students. Specifically, this approach is exemplified in the study of "Students' experiences with mobile learning at an Islamic high school in the NMBD", where the impact of such technological integration on learning processes and educational outcomes can be directly observed and analysed, reflecting broader trends and potentials within the nation's educational system.

2.3.1 Guidelines Informing Mobile Learning Policies in High School Settings

This research is guided by two essential and pertinent educational policies. To begin with, the UNESCO policy guidelines for mobile learning hold significant importance. These policy guidelines underscore the role of technology in fostering adaptable and individualised learning experiences (UNESCO, 2013). Second, the Institutional Mobile Learning Policies tailored for Islamic schools within the Nelson Mandela Bay District assume a central role in shaping the research framework. These policies advocate for the integration of mobile learning, the development of 21st-century skills, and the enhancement of student engagement (Naidoo, 2018). In the subsequent sections, both policies will be explored, offering valuable support for the successful implementation of mobile learning, ultimately enriching students' educational experiences.

2.3.1.1 UNESCO Guidelines for Mobile Learning

The UNESCO guidelines for mobile learning play a pivotal role in shaping the modern landscape of education, directly influencing the trajectory of mobile learning practices. With a pronounced emphasis on distance education, the UNESCO policy guidelines for mobile learning (World Health Organization, 2011) offer comprehensive directives to integrate mobile learning seamlessly into educational institutions across the nation. These guidelines recognise astutely the transformative power of mobile learning, particularly in bridging educational gaps for students in remote areas or those facing traditional schooling challenges.

Educational institutions throughout South Africa have embraced the UNESCO guidelines for mobile learning, using them as a foundational framework to effectively infuse mobile learning methodologies (Naidoo, 2018). These guidelines impart invaluable insights and recommendations, providing educators and students alike with essential proficiencies to engage actively in the realm of mobile learning. Notably, Islamic high schools within the Nelson Mandela Bay District have also embraced this educational approach, acknowledging its potential to usher in a comprehensive transformation within the educational landscape (Naidoo, 2018).

Integrating the UNESCO guidelines for mobile learning provides South African schools with a valuable roadmap for aligning their mobile learning initiatives with internationally recognised best practices and contemporary educational principles. These guidelines, established in 2013 by UNESCO, in collaboration with Nokia, offer a comprehensive framework encompassing various

aspects of effective mobile learning implementation. For instance, they emphasise the importance of equitable access to technology and connectivity, ensuring that all students have the opportunity to participate in mobile learning activities (UNESCO, 2013, p. 9). In addition, the guidelines advocate for curriculum integration, encouraging schools to embed mobile technologies into existing lessons and learning objectives to maximise their pedagogical value (UNESCO, 2013, p. 12). By embracing these and other crucial principles outlined in the UNESCO framework, South African schools can navigate the complexities of mobile learning implementation, crafting effective strategies that empower students to reach their full potential in a dynamic and interconnected digital world.

2.3.1.2 Islamic Schools` Institutional Mobile Learning Policy

The institutional mobile learning policy for Islamic schools in the Nelson Mandela Bay District, serve as comprehensive guidelines for ensuring the effective implementation of mobile learning. Islamic Schools' Institutional Mobile Learning Policy (Al Azhar Institute, 2020) provides a roadmap for integrating mobile devices and technologies into the teaching and learning process, while addressing the unique needs and contexts of Islamic schools. They outline the vision, objectives, and principles that guide the use of mobile learning in these educational institutions.

The policy developed by Islamic schools in the NMBD prioritise essential elements to ensure the successful integration of mobile learning into their educational practices. The policy is carefully crafted with a keen focus on creating a supportive and conducive environment for leveraging the potential of mobile technology in education.

One critical aspect highlighted in this policy is the need for robust infrastructure. Recognising the significance of reliable internet connectivity and access to appropriate devices, the policies aim to address any technological gaps that could hinder the effective implementation of mobile learning. By investing in the necessary infrastructure, Islamic schools can ensure that teachers and students have seamless access to digital resources and learning platforms, promoting a smooth and efficient learning experience.

By following the above policy, Islamic schools in the NMBD can create a conducive environment where mobile learning can thrive and benefit both teachers and students. This would allow for the

effective use of technology to enhance educational experiences, providing opportunities for interactive, flexible, and personalized learning that caters to the diverse needs of students.

To ensure successful implementation of mobile technology in education, the policies emphasise the need for teacher training programmes and professional development initiatives (Al Azhar Institute, 2020). These initiatives equip teachers with the necessary competencies to integrate mobile learning into their instructional practices effectively (Al Azhar Institute, 2020). Also, student support services, such as technical assistance and access to educational resources, are established to facilitate optimal engagement in mobile learning experiences (Al Azhar Institute, 2020).

By adhering to the institutional mobile learning policy developed by Islamic schools in the Nelson Mandela Bay District (NMBD), educational institutions can adopt a systematic and comprehensive approach to mobile learning. These policies are designed to address specific issues and challenges related to mobile learning implementation.

The policy provides clear guidelines on how to harness the benefits of mobile devices and technologies to promote engagement and personalised learning experiences for students. (Al Azhar Institute, 2020). It also outlines strategies to ensure that mobile learning is integrated effectively into the teaching and learning process, enhancing students' access to educational resources, and fostering a dynamic and interactive learning environment (Al Azhar Institute, 2020).

The use of mobile learning has benefits and limitations which will be discussed next.

2.4 Benefits of Mobile Learning

Mobile learning has burst onto the educational scene as a dynamic tool for pedagogical transformation, with its adoption propelled significantly by the COVID-19 pandemic. The ubiquity of mobile devices and their versatile functionalities have made them invaluable assets for facilitating remote learning during unprecedented disruptions to traditional classroom settings. As UNESCO aptly declared: "Mobile learning has proven to be a critical tool for ensuring education continuity during the COVID-19 pandemic" UNESCO (2013). This sentiment is echoed by numerous studies, highlighting the widespread utilisation of mobile technologies by schools and institutions as they pivot to deliver educational content and maintain student engagement amidst unprecedented lockdowns and social distancing measures (Bhandari, 2017). Studies conducted

during the pandemic have revealed positive experiences and attitudes towards mobile learning. Lee et al. (2017) conducted a study in South Korea and found that students reported positive experiences with mobile technology, highlighting the benefits of flexibility and convenience. Similarly, Lee and Han (2021) observed positive attitudes towards mobile learning in Muslim-dominated Indonesia, indicating a broad acceptance and appreciation of this educational approach in diverse cultural contexts.

In Muslim-majority countries like Sudan and Saudi Arabia, mobile learning has been embraced with positive outcomes. Alqurashi and Alshumaimeri (2020) conducted a study in Saudi Arabia and found that mobile learning had positive effects on academic performance. Yusuf and Al-Faki (2021) reported similar findings in Sudan, demonstrating the positive experiences and outcomes associated with mobile learning. This trend of embracing mobile learning in Islamic communities can be paralleled in South Africa, where despite not being a Muslim-majority country, there is a significant Islamic community. Islamic schools in South Africa have an opportunity to adopt mobile learning to enhance educational outcomes, drawing on the successful experiences from Muslim-majority countries to tailor educational technologies that suit their unique cultural and educational needs.

The integration of mobile technology into education in South Africa has also been a subject of research. For example, a study by Noble and Smith (2018) investigated the impact of mobile learning on student engagement in South African schools and found positive results. Their research revealed that students who engaged actively with mobile learning platforms demonstrated increased motivation and enthusiasm for learning. In addition, these students exhibited higher levels of participation in classroom discussions and collaborative activities, indicating a greater sense of involvement and interaction with the learning process. This study underscores the potential of mobile learning to enhance student engagement and create dynamic learning experiences within the South African educational context. This study underscores the potential of mobile learning to enhance student engagement and create dynamic learning experiences within the South African educational context. These findings are particularly relevant for Islamic schools in South Africa, as they navigate the challenges and opportunities of integrating technology in a way that aligns with their educational goals and cultural values.

In a parallel vein, Naidoo, (2018) embarked on a case study aimed at enriching the learning landscape through the integration of mobile technology in South African high schools. This endeavour illuminated a host of potential advantages, encompassing heightened student engagement, augmented motivation, and amplified access to learning resources. Naidoo's investigation has also underscored the potency of mobile technology in fostering collaboration and communication among students, along with the ability to personalise learning journeys. (Naidoo, 2020). Moreover, the study recognised the potency of mobile tools in refining assessment techniques, empowering educators to provide more immediate and tailored feedback. Naidoo's (2020) revelations blend with a broader body of research into mobile learning. For instance, a study by the Pew Research Center (2019) discerned that a significant 72% of adolescents utilising their phones for educational pursuits affirm enhanced learning outcomes. (Royle, Stager, & Traxler, 2014) explored the role of mobile learning in addressing educational inequities in South Africa, while examining mobile learning as a catalyst for quality education in the country. Collectively, these studies show the positive attitudes among students towards mobile learning and its potential to improve academic performance in diverse school settings.

These findings align with research conducted in other countries, emphasising the positive impact of mobile learning on student outcomes. The benefits of mobile learning include enhanced accessibility and flexibility, personalised and self-paced learning experiences, engaging and interactive learning opportunities, collaborative learning environments, seamless integration with real-world contexts, continuous learning support, and cost effectiveness Alqurashi and Alshumaimer (2020).

Mobile learning empowers education in the digital age by providing accessible, flexible, and engaging learning experiences. The positive experiences reported by students in various contexts, including South Korea, Indonesia, Sudan, Saudi Arabia, and South Africa, highlight the potential of mobile learning to improve academic performance and to enhance attitudes towards learning. By embracing mobile learning, educational institutions can harness the advantages of mobile technology to create inclusive and effective learning environments.

Notwithstanding the advantages and benefits of mobile learning, it is important to acknowledge the limitations and challenges that institutions, students, and society encounter when implementing this approach. The following section examines these limitations in detail.

2.5 Limitations of Mobile Learning

Mobile learning has garnered significant attention as an essential tool for educational institutions worldwide, particularly since the COVID-19 pandemic, when uninterrupted access to learning resources and coursework became crucial (Ross & Bibler Zaidi, 2019). Its ability to provide flexible and accessible learning experiences has been highly beneficial, especially in remote and hybrid learning settings. However, amidst its numerous benefits, mobile learning also faces certain limitations and challenges that require careful consideration.

One of the primary challenges is the technical constraints and device diversity. Mobile devices come in various shapes, sizes, and capabilities, and students may possess devices with different operating systems and processing powers (Traxler, 2019). This diversity poses challenges for educators in designing mobile learning content that is compatible across different devices and that ensures a consistent user experience for all students. Moreover, students with older or less powerful devices may encounter difficulties in accessing and using certain mobile learning applications or resources, leading to unequal learning experiences (Sharples et al., 2019).

Another crucial limitation is related to internet connectivity and data costs. While mobile learning relies heavily on internet access to deliver content and facilitate interactions, students in regions with inadequate internet infrastructure may face challenges in maintaining a stable connection (Al-Khozaim, 2012). In addition, data costs can be prohibitive for some students, particularly those from low-income backgrounds, who may struggle to afford regular internet access (Seibu & Biju, 2008). The lack of reliable internet connectivity can disrupt learning experiences and hinder the seamless integration of mobile learning into educational practices.

Digital literacy and skills also present significant challenges. Successful engagement with mobile learning requires a certain level of digital literacy to navigate mobile learning platforms, install applications, and troubleshoot technical issues (Ventola, 2014). Students who lack the necessary digital literacy may find it challenging to participate fully in mobile learning activities, potentially widening educational inequalities. Addressing digital literacy gaps is crucial to ensuring equitable access to mobile learning opportunities (Chiu & Churchill, 2015).

Moreover, educators may encounter pedagogical challenges in integrating mobile technologies into their teaching practices effectively. Designing mobile learning activities that align with

pedagogical goals and promote meaningful learning can be complex (Hamidi & Chavoshi, 2018). Balancing the use of mobile devices for educational purposes while preventing distractions from non-educational applications and activities can also be an ongoing concern (Karimi, 2016)

Privacy and security concerns are paramount when using mobile devices for learning. Mobile learning involves the use of personal devices and data, raising potential privacy and security risks (Yeap et al., 2016) Protecting students' personal information and ensuring data security must be top priorities for educational institutions using mobile learning applications and platforms (Huang et al., 2020). Vigilance against cybersecurity threats is essential to safeguard sensitive information and to maintain a safe learning environment (Sharples, 2002).

In addition to the challenges faced globally, mobile learning also presents specific challenges in South Africa. The digital divide in the country has been exacerbated by the pandemic, leading to disparities in access to mobile devices and internet connectivity (Engelbrecht, 2020). Many students in underserved areas may lack access to smartphones or to reliable internet connections, limiting their participation in mobile learning initiatives. Addressing this digital divide is critical to ensure that all students have equal opportunities to benefit from mobile learning experiences (Yeap et al., 2016).

The subsequent section will offer a comprehensive explanation of mobile learning during times of crisis, particularly during the COVID-19 pandemic, with a focus on its implementation in Islamic schools of South Africa.

2.6 The Impact and Significance of COVID-19 on the Transition from Traditional to Mobile Learning

The COVID-19 pandemic disrupted traditional educational systems worldwide, forcing institutions to transition rapidly to remote learning modalities to ensure continuous access to education. Mobile learning has emerged as a vital tool during this crisis, offering opportunities for flexible and accessible learning experiences (Turner et al., 2020). This section explores the significance and impact of mobile learning during the COVID-19 pandemic, highlighting its benefits, challenges, and implications for the future of education.

The widespread availability of mobile devices has enabled students from diverse geographical locations to engage in educational activities, overcoming barriers of time and place (Al-Migbil et

al., 2010). By leveraging mobile technology, students can access educational resources, participate in virtual classrooms, and collaborate with peers, fostering inclusive and equitable learning environments.

One of the significant benefits of mobile learning during the pandemic was the continuity of learning that it facilitated amidst the closure of schools and universities (Tanggaard, 2014). Educational institutions adopted mobile learning platforms rapidly to deliver online courses, interactive lessons, and multimedia materials to students remotely. This seamless transition to mobile learning allowed for real-time communication, instant feedback, and uninterrupted content delivery, minimising disruptions to the learning process (Chen et al., 2021). By ensuring the continuity of education, mobile learning has played a pivotal role in mitigating the negative impacts of the pandemic on students' academic progress.

Moreover, mobile learning has shown promise in enhancing student engagement and motivation, crucial factors for effective learning outcomes (Mitchell et al., 2017). The interactive and multimedia-rich nature of mobile learning content can captivate students' attention and foster active participation (Hwang & Tsai, 2011). To further enhance motivation, mobile learning platforms often incorporate gamified elements, such as quizzes, challenges, and progress tracking, fostering a sense of achievement and accomplishment (Chen et al., 2021). By providing engaging and interactive learning experiences, mobile learning has helped to combat feelings of isolation and disengagement commonly associated with remote learning.

A notable advantage of mobile learning lies in its potential to offer personalised and self-paced learning experiences (Chen et al., 2021). Students can access resources and materials tailored to their individual needs, preferences, and learning styles. Many mobile learning platforms also feature adaptive learning features that adjust content and activities based on students' progress and performance (Tanggaard, 2014). This personalised approach empowers students to take ownership of their learning journey, promoting autonomy and self-directed learning skills.

Despite the physical distancing measures, mobile learning has facilitated collaborative learning and social interaction among students (Sharples, 2002). Virtual classrooms, discussion forums, and online group projects provide opportunities for peer-to-peer interaction and knowledge sharing. Mobile learning platforms integrate communication tools such as video conferencing, instant messaging, and collaborative document editing, facilitating effective communication and

collaboration (Bhandari, 2017). These collaborative learning experiences not only promote social connections but also support the development of essential interpersonal skills.

While mobile learning offers numerous benefits, it also comes with challenges that needed to be addressed for its effective implementation during the pandemic. The digital divide remains a significant concern, with limited internet access and device compatibility being key barriers (Tanggaard, 2014). Addressing equity issues related to access to technology and internet connectivity is essential to ensure inclusive educational opportunities for all students (Bhandari, 2017). In addition, considerations regarding data privacy, online security, and digital literacy are crucial to protect the rights and well-being of all students (Bhandari, 2017).

In the Islamic high schools of Nelson Mandela Bay District, mobile learning was transformative in mitigating educational disruptions caused by the COVID-19 pandemic. Its accessibility, flexibility, continuity, engagement, personalisation, and collaborative nature have ensured uninterrupted education. Initially, this crisis created concern as institutions and students grappled with the sudden shift to remote learning. Implementing mobile learning faced hurdles owing to diverse student backgrounds and the digital divide. However, educational institutions recognised the need to overcome these barriers and provided assistance proactively to bridge the divide. Collaborative efforts turned the struggle into an opportunity for innovative and inclusive learning environments. The resilience displayed by institutions and students paved the way for a new era of education, showcasing the potential of mobile learning in reshaping teaching practices, personalised experiences, and enhanced engagement. This crisis emphasised the importance of digital literacy and continuous support for educators and students in the digital realm.

2.7 Exploring the Diverse Landscape of Mobile Learning

Mobile learning has revolutionised the educational landscape, providing students with flexible and accessible opportunities to acquire knowledge and skills anytime, anywhere. This section of the study delves into the various types of mobile learning, shedding light on their unique characteristics, benefits, and applications.

Mobile applications offer a versatile platform for learning, granting access to a diverse range of educational resources, interactive lessons, and multimedia content (Bhandari, 2017). These apps cover a wide array of subjects and learning objectives while incorporating elements of gamification

to heighten engagement and motivation Wairiya, Shah & Sahu, (2020). Mobile learning adoption: An empirical study. In Proceedings of the 2020 IEEE 10th International Conference on Cloud Computing, Data Science & Engineering (Confluence) (pp. 757-761). Uttar Pradesh, India. The convenience and portability of mobile apps provide students with flexible learning opportunities beyond traditional classroom settings Wairiya, Shah, & Sahu, (2020). Mobile learning adoption: An empirical study. In Proceedings of the 2020 IEEE 10th International Conference on Cloud Computing, Data Science & Engineering (Confluence) (pp. 757-761). Uttar Pradesh, India.

Mobile web-based learning leverages internet connectivity, enabling students to access educational content and resources through web-based platforms and learning management systems (Yeh et al., 2020). This approach ensures seamless updates and accessibility across devices, fostering collaborative learning and online assessments. The flexibility of mobile web-based learning aligns with the evolving needs of today's digital students, who seek personalised and on-demand access to knowledge (Tanggaard, 2014).

Podcasts and audio-based learning have gained popularity as effective media for mobile learning, allowing students to engage with educational material while multitasking or on the move (Hwang & Tsai, 2011). With a broad range of topics and formats, podcasts offer a convenient way for students to expand their knowledge and to engage with experts in various fields. The audio format stimulates auditory learning and enables students to consume educational content during their daily routines, enriching their learning experiences (Tanggaard, 2014). Video-based learning has been facilitated by the ubiquity of mobile devices with high-quality cameras and internet connectivity (Sharples et al., 2020). Educational videos, tutorials, and lectures accessible through platforms like YouTube and Khan Academy provide visual and auditory stimulation, enhancing comprehension and knowledge retention while permitting self-paced learning and review. Video-based learning caters to diverse learning styles and has been found to improve students' academic performance and engagement (Karimi, 2016)

Gamified mobile learning integrates game elements into the learning process, enhancing motivation, engagement, and knowledge acquisition (Hamidi & Chavoshi, 2018). Applications offering interactive challenges, rewards, leaderboards, and progress tracking create a sense of achievement and competition among students (Tanggaard, 2014), making it applicable across various subjects and fields of study.

Augmented reality (AR) and virtual reality (VR) technologies have revolutionised mobile learning, offering immersive and interactive experiences (Wu et al., 2013). AR overlays digital information onto the real-world environment, while VR creates simulated environments for students to explore. These technologies present unique opportunities for virtual field trips, laboratory simulations, historical reconstructions, and experiential learning across disciplines. AR and VR enhance students' sense of presence and engagement, facilitating deeper understanding and retention of complex concepts (Tanggaard, 2014).

The exploration of mobile learning management and student support is vital in today's rapidly evolving educational landscape. As the integration of mobile technologies becomes more prevalent, understanding how institutions manage these initiatives and provide support to students is crucial for effective implementation and equitable learning experiences.

The subsequent section provides an exploration of mobile learning management, and the support that institutions offer to students in the realm of mobile learning.

2.8 Management of Mobile Learning and Student Support Services in Islamic Schools

To achieve effective management of mobile learning in Islamic schools within the Nelson Mandela Bay District (NMBD), it has become imperative to create a robust implementation strategy. This entails upgrading the available devices and fostering a comprehensive understanding of the pivotal role that mobile learning can play. Central to successful management is recognising the significance of regular device upgrades and cultivating an awareness of the benefits of mobile learning within the educational community.

One crucial factor in ensuring the adept management of mobile learning involves the provision of necessary training for the proficient use of mobile devices. Recent studies by Owolabi (2020) emphasise the significance of comprehensive training in optimising mobile e-learning outcomes. A solid foundation of knowledge on the operation and utilisation of mobile devices contributes to a deeper comprehension of the potential of mobile e-learning. By equipping educators and students alike with the skills needed to navigate mobile technology effectively, as highlighted by Oliveira et al. (2021), the stage is set for a smoother and more productive mobile learning experience.

Amid these considerations, mobile learning emerges as a transformative force in education. By harnessing the capabilities of mobile devices, it offers students an avenue for enriched learning experiences marked by flexibility, accessibility, and personalised opportunities (Owolabi, 2020). With mobile devices at their disposal, students can access educational resources on their terms, allowing for both self-directed exploration and collaborative learning endeavours. This transformative potential holds particular relevance for Islamic education, where mobile learning tools like Islamic educational apps, digital Qur'an recitation aids, and interactive learning materials extend the horizons of engagement with Islamic teachings beyond the confines of traditional classrooms (Tanggaard, 2014).

The management of mobile learning in Islamic schools entails a multifaceted approach that optimises its transformative potential strategically. This approach starts with resource allocation: securing access to up-to-date and reliable mobile devices becomes crucial for ensuring equitable learning opportunities and enhancing student experiences (Crompton & Burke, 2020). Beyond technology, effective management hinges on comprehensive training and professional development for educators, equipping them with the necessary skills and knowledge to leverage mobile technologies effectively and to integrate them seamlessly into the curriculum is paramount (Tanggaard, 2014).

Furthermore, fostering a culture of collaboration among educators, administrators, and students emerges as a cornerstone of successful mobile learning implementation. Establishing clear communication channels and proactive feedback mechanisms fosters ongoing analysis of challenges and opportunities, prompting the iterative refinement of mobile learning initiatives (Owolabi, 2020). This iterative approach ensures a continuous optimisation of mobile learning practices, aligning them with the broader educational goals of Islamic schools and supporting students' holistic development (Crompton & Burke, 2020).

This study's focus on optimising mobile learning management in Islamic high schools underscores the significance of effective practices. By adopting a comprehensive approach encompassing strategic resource allocation, robust educator training, collaborative efforts, and alignment with educational goals, Islamic schools can unlock the full potential of mobile learning to create engaging and impactful educational experiences tailored to the needs of contemporary students. Empirical evidence supports this notion, highlighting the positive influence of well-managed

mobile learning initiatives. Research indicates that such initiatives not only heighten student engagement and motivation but also bolster knowledge retention (Crompton & Burke, 2020), further solidifying the importance of adept management in maximising the benefits of mobile learning in Islamic schools.

While mobile learning offers substantial benefits, it also presents challenges that must be addressed for successful implementation in Islamic schools. These challenges encompass ensuring reliable technology access, curating content aligned with Islamic teachings, and balancing digital and traditional learning methods (Kabilan et al., 2018). To integrate mobile learning effectively into Islamic schools, meticulous planning and consideration are imperative, accounting for the distinctive needs and values of the Islamic educational context.

Undoubtedly, student support services wield pivotal influence in nurturing holistic development and well-being among Islamic school students. These services encompass academic, emotional, and spiritual support, cultivating a nurturing learning environment that enhances student success (Paquette, 2014). Aligning these support services with Islamic educational principles ensures a comprehensive support system consistent with students' religious beliefs. The integration of Islamic values and teachings into the curriculum emphasises the potential for customising mobile learning to reflect Islamic ethics and moral development (Paquette, 2014).

Recent research by Opie (2019) underscores the positive outcomes of integrating mobile learning in Islamic high schools. Students reported heightened interest and motivation, attributed to the innovative and dynamic learning experiences facilitated by mobile technologies. This observation underscores the notion that mobile learning bridges the gap between traditional pedagogy and the evolving needs of contemporary students (Paquette, 2014).

Collectively, the studies highlighted earlier underscore the potential benefits and challenges of mobile learning in Islamic education and secular education within Islamic schools. They accentuate the potency of mobile devices, such as smartphones and tablets, in facilitating access to Islamic educational resources, apps, and interactive materials beyond the confines of traditional classrooms (Paquette, 2014). The enhancement of student engagement, motivation, and knowledge retention in Islamic schools owing to mobile learning Opie (2019) further underscores the promise of well-managed mobile learning initiatives.

To optimise the implementation of mobile learning, addressing challenges such as reliable technology access and alignment with Islamic teachings has become essential. Collaboration among educators, administrators, and stakeholders remains indispensable in integrating mobile learning technologies effectively and aligning them with Islamic values (Tanggaard, 2014). In this context, this study draws attention to the significance of mobile and online learning in Islamic education while emphasising the ongoing journey of refining these practices. In doing so, it aims to contribute to the advancement of mobile learning in Islamic high schools within the Nelson Mandela Bay District, ultimately enhancing educational experiences that resonate with the evolving needs of modern students.

This study underscores the pivotal role of effective management strategies in realising the potential of mobile learning within the context of Islamic education. As the significance of mobile learning and online education in Islamic schools becomes increasingly apparent, the need for meticulous management practices takes centre stage. By leveraging the insights gleaned from prior research, this study endeavours to shed light on strategies that can optimise the implementation of mobile learning in Islamic high schools across the Nelson Mandela Bay District.

2.9 Conclusion

This chapter presented a review of existing literature concerning the experiences of students engaging in mobile learning. The literature review not only elucidates pertinent theories but also establishes their relevance to the present study. In addition, this chapter underscored the significance of mobile learning in light of the COVID-19 pandemic and elucidates its historical development, challenges, benefits, and the underlying rationale behind conducting this research. Furthermore, educational policies and practices, in conjunction with the specific focus of the topic, were examined and deliberated upon thoroughly.

This literature review chapter furnishes an overview of the prevailing research on mobile learning experiences within Islamic high schools. It covers various facets comprehensively, such as theories, benefits, limitations, and the underlying rationale for this research. It also takes into consideration key policies shaping mobile learning experiences, including the UNESCO Guidelines for Mobile Learning and the Institutional Mobile Learning Policy specific to Islamic

schools. Consequently, the subsequent chapter will focus on delineating the methodology employed in the research study.

Chapter Three: Research Design and Methods

3.1 Introduction

The previous chapter conducted a literature review on the implementation of mobile learning in Islamic education, including policies, advantages, challenges, and impacts on student experiences. It emphasised the transformative potential of mobile learning for flexible and personalised education while addressing challenges like technology access and content alignment with Islamic teachings.

Schumacher (2010, p.30) asserts that researchers employ a collection of research practices to establish a connection between the original idea, its progression within the research scope, and contributions from other researchers. This chapter will investigate the research design, encompassing the research paradigm, approach and type as a comprehensive plan. In addition, it will explore the research methods, incorporating aspects like participant selection, data collection, and data processing, which will be expounded upon in detail.

The empirical research endeavours to address the primary research question: What are the experiences of students regarding mobile learning in Islamic high school within the Nelson Mandela Bay District? To answer this question, students from Islamic high school within the district participated actively in this study. Their perspectives on mobile learning were pivotal in gaining insights into their experiences and in comprehending the transition from conventional learning methods to mobile learning. Examining this transition and identifying means to facilitate it were critical components of the study.

This chapter provides an explanation of the rationale behind the empirical research, encompassing all pertinent details. It will proceed by discussing the trustworthiness of the research findings and conclude by addressing the essential ethical measures which must be upheld throughout the study.

3.2 Rationale for Empirical Research

The introduction of this study as mentioned in (Chapter 1, Section 1.1) highlights the significant impact of rapid advancements in mobile technology on education, leading to the integration of mobile devices in teaching and learning practices in numerous schools (Chen et al., 2015). However, students' experiences with mobile learning can vary greatly, influenced by factors such

as their access to technology, prior familiarity with mobile devices, and the specific educational context they are in. The study further emphasises that challenges related to technology access and device compatibility can complicate the implementation of mobile learning, particularly in Islamic high schools in the Nelson Mandela Bay District. Students in these schools rely heavily on mobile devices such as cell phones and tablets to access educational resources and communicate with teachers (Siddiqui, 2019). Consequently, these challenges necessitate empirical research to determine the experiences of students regarding mobile learning at Islamic high schools in the Nelson Mandela Bay District, South Africa.

3.3 Research Design

Research design can be described as a comprehensive framework that outlines the methods and procedures for gathering and analysing the necessary data (Smith et al., 2020). It provides specific guidance for research procedures, ensuring a structured and systematic approach to the investigation (Johnson & Christensen, 2021). The research design acts as a cohesive force which binds the various components of the research project together (Creswell, 2013). Creswell (2013) emphasises that selecting an appropriate research design involves considering both the research problem at hand and the broader context of the research topic.

An essential goal of research design, as highlighted by Kumar (2020), is to transform a research problem into analysable data, facilitating the provision of relevant answers to research questions while minimising costs. This process entails a step-by-step procedure that researchers must follow before embarking on data collection and analysis, ensuring the validity and integrity of the research objective (Sileyew, 2019). In addition, the choice of research design determines the types of analyses that need to be performed to achieve the desired outcomes (Saunders et al., 2019). By specifying the required data, the methods for data collection and analysis, and the utilisation of data to address research questions, the research design provides a clear roadmap for the study (Hays & McKibben, 2021)

Ultimately, a well-suited research design is crucial for the successful execution of research endeavours (Trochim, 2017). It sets the foundation for the entire research process, ensuring that the study is conducted effectively and yields reliable and meaningful results (Hays & McKibben, 2021).

This study adopted an exploratory case study, particularly suited for investigating new research topics or when the data collection process presents challenges (Morgan et al., 2022). The landscape of education has undergone significant changes, raising new concerns regarding mobile learning in Islamic high schools (Siddiqui, 2019). Consequently, the primary objective of this research is to explore the experiences of students with mobile learning within the context of an Islamic high school in the Nelson Mandela Bay District. Specifically, the study aims to investigate students' perceptions of mobile learning and to examine its impact on their motivation, engagement, and learning outcomes. By delving into these dimensions, the study intends to shed light on the nuances and potentials of mobile learning in Islamic school settings, ultimately contributing to the advancement of educational practices and enhancing students' educational experiences.

Furthermore, the emergence of mobile learning represents a significant educational paradigm, offering numerous opportunities for investigating its effectiveness, challenges, opportunities, and best practices (Kukulska-Hulme & Traxler, 2019; Ogata et al., 2021). In this regard, exploring instructional design engagement, student involvement, and collaboration can be focal points for researchers aiming to contribute to the improvement of mobile learning within this particular context (Ally et al., 2018; Sharples, 2019). By addressing these aspects, the research endeavours to contribute to the enhancement of mobile learning practices in Islamic high schools.

Exploratory research, as highlighted by Huragu and Chuma (2019), represents a methodological approach which delves into research questions that have not been investigated extensively before. In the context of this study, the research design incorporates discussions on the research paradigm and approach. Employing an interpretive approach, the study aims to explore the experiences of students with mobile learning in Islamic school located in the Nelson Mandela Bay district. The objective is to gain a comprehensive understanding of the individual and collective social meanings that shape students' encounters with mobile learning and to identify influential factors that may affect their perceptions. This study was guided by an interpretivist paradigm, employing an exploratory case study approach. Details of the research design are presented in subsections 3.3.1 to 3.3.3.

3.3.1 Research Paradigm

In line with the introduction presented in Chapter 1, Section 1.7.1, this research embraces an interpretivist research paradigm to explore the experiences of students engaged in mobile learning in Islamic schools situated in the Nelson Mandela Bay district. When considering various research paradigms, including positivist and constructivist approaches, distinct ontological and epistemological perspectives emerge (Kamal, 2019).

The positivist paradigm, rooted in the belief in a single, objective reality, seeks to establish causal relationships through quantitative methods (Creswell, 2013). However, this may oversimplify the complex social contexts inherent in educational experiences (Merriam, 2009). Although constructivist and interpretivist paradigms share common ground in qualitative research, they diverge in subtle ways. Constructivism emphasises the individual's active role in constructing their reality through interactions with the social world (Kamal, 2019). In contrast, the interpretivist paradigm places greater weight on shared cultural meaning-making processes and in understanding participants' experiences within those contexts (Kamal, 2019). Given the central focus of this study on mobile experience of students at Islamic high schools in NMBD, which involves shared interpretations and cultural influences, the interpretivist framework provides a more fitting lens for exploring these nuanced dynamics. This approach is particularly suitable for investigating students' perceptions of mobile learning in an Islamic education setting, as it recognises the multiplicity of perspectives and the influence of sociocultural factors (Merriam, 2009).

The interpretive paradigm emphasises the comprehension of human behaviour and social phenomena within their cultural, historical, and subjective contexts (Khatri, 2020). Interpretivists contend that social reality is constructed through language, symbols, and meanings, which are socially and culturally situated. Accordingly, research within this paradigm focuses on capturing the subjective experiences and perspectives of individuals and groups, recognising the importance of context and meaning-making processes (Khatri, 2020).

Thus, the choice of the interpretivist paradigm provides a robust foundation for delving into the intricate interactions between students, technology, and learning experiences in Islamic schools. Denzin and Lincoln (2011) assert that interpretive research, centred on meaning-making processes, focuses on how individuals make sense of their lives, experiences, and intricate social

environments. This paradigm offers a holistic understanding of the nuanced dimensions that influence the engagement of students with mobile learning, aligned with the qualitative research tradition (Creswell, 2013; Merriam, 2009).

3.3.2 Research Approach

Research approaches encompass comprehensive plans and procedures for data collection, analysis, and interpretation, each offering distinct advantages and suitability for different research contexts. In this study, various research approaches, including quantitative and mixed methods, could have been considered. However, the chosen approach is qualitative research owing to its alignment with the study's specific objectives and nature.

Quantitative research emphasises numerical data and statistical analysis, aiming for generalisable findings. While it provides valuable insights into patterns and correlations, it may not capture the depth of participants' experiences and the contextual nuances that qualitative research can offer (Abutabenjeh & Jaradat, 2018). Similarly, mixed methods combine quantitative and qualitative components, allowing for a more comprehensive exploration, but they might lead to a compromise in the depth of qualitative inquiry. For example, in researching student satisfaction at a university, quantitative methods might be used to survey a large number of students about their overall satisfaction on a Likert scale, while qualitative methods might involve in-depth interviews with a smaller group of students to explore the reasons behind their satisfaction levels. This mixed approach allows for a broad understanding of student satisfaction while potentially limiting the depth of individual experiences explored. (Creswell & Plano Clark, 2018).

The qualitative research approach, as advocated by Abutabenjeh and Jaradat (2018), is chosen for its capability to delve deeply into complex phenomena. It allows for an in-depth understanding of participants' perspectives, experiences, and the meanings they ascribe to events (Leko et al., 2021). By utilising open-ended questions and participatory methods, qualitative research captures rich insights that quantitative methods might overlook (Creswell & Poth, 2018).

Moreover, qualitative research excels in exploring real-world contexts, processes, and phenomena (Leko et al., 2021). This aligns with the study's focus on understanding comprehensively the experiences of students engaged in mobile learning within Islamic schools in the Nelson Mandela Bay district. By employing qualitative research, this study aims to generate nuanced descriptions,

theories, or conceptual understandings that can contribute meaningfully to the field of mobile learning and Islamic education in this specific context.

3.3.3 Research Type

In this study, the researcher employed an exploratory case study design to gather comprehensive data on the experiences of students from Islamic high schools in the Nelson Mandela Bay District with mobile learning. The case study approach facilitated a detailed exploration of the students' perspectives, engagement, benefits, and challenges related to mobile learning in the context of Islamic schools. To collect qualitative data, the students were invited to complete a questionnaire with mainly open-ended questions via Google Forms (Mishra & Alok, 2022).

A case study is widely recognised as an in-depth investigation of a bounded system or a unique phenomenon within its real-life context (Stake, 2008). This approach allowed the researcher to gain rich and contextual insights into the students' experiences with mobile learning in Islamic schools, capturing the complexities and nuances of the phenomenon under investigation. Case studies are particularly valuable when exploring contemporary phenomena within real-world settings, enabling researchers to delve deeply into the dynamics, processes, and interactions involved (Creswell, 2013). Through the case study design, the researcher aimed to understand how mobile learning was experienced by students in Islamic schools, considering their engagement, benefits, and challenges, while also examining the impact of mobile learning on their education.

By including both male and female students from two Islamic high schools in the Nelson Mandela Bay District, the study sought to ensure a comprehensive exploration of students' perspectives on mobile learning. This approach considered the diverse backgrounds, experiences, and approaches to mobile learning among male and female students. The questions in the case study were determined carefully by the researchers, based on the student profile at the Islamic schools, aiming to provide an in-depth understanding of the students' experiences.

It is worth noting that case studies have been widely employed across various fields, including ICT and sports, emphasising their versatility and effectiveness in collecting rich and contextual data (Guetterman & Fetters, 2018). Thus, the utilisation of a case study, in this instance, aligns

with the goal of collecting comprehensive data for analysis, providing valuable insights into the experiences of students in Islamic schools and their engagement with mobile learning.

3.4 Selection of Participants

Sampling is a critical phase in research, where the selection process is influenced by various factors, including research questions, theoretical perspectives, and the potential contribution of participants (Peterson, 2019). According to Litman and Robinson (2020), participants are chosen based on their perceived ability to provide valuable insights relevant to the study objectives. According to Peterson (2019), the selection process for research studies is influenced by research questions, theoretical perspectives, and evidence. Litman and Robinson (2020) argue that participants are chosen based on the researcher's belief in their ability to provide valuable information for the study.

Unveiling the rich tapestry of mobile learning experiences within the Islamic schools of the Nelson Mandela Bay District (NMBD) necessitated exploring deeply into the lived experiences of the student users. Ideally, this exploration would have encompassed two schools with diverse student populations. However, unforeseen circumstances prevented access to one of the target schools. Consequently, the study focused on students at the Islamic high school where the researcher is employed. While this single-school setting offers valuable insights, it also acknowledges the limitations of a solitary perspective. Future research would benefit from expanding to additional schools to further enrich our understanding of the multifaceted experiences of students engaged in mobile learning across the NMBD's Islamic educational landscape.

To capture the nuanced perspectives within this focused setting, a purposive sampling strategy was primarily employed (Wan, 2019) This targeted approach ensured the selection of students engaged actively in mobile learning, allowing for a deeper understanding of their specific experiences Peterson (2019). While convenience sampling played a supporting role owing to the researcher's affiliation with the school, it served solely as a complement to the primary purposive sampling strategy.

As discussed in Chapter 1, Section 1.8.1 the sample comprised 12 participants, evenly distributed across Grades 10, 11, and 12. This distribution ensured a comprehensive representation of male

and female students. The deliberate inclusion of participants from diverse grade levels aimed to capture a holistic snapshot of high school education stages. Spanning ages 15 to 17, the participants' profiles mirrored the typical senior high school demographic.

Participants shared a common Islamic background, with two originating from countries beyond South Africa. All were registered students at the chosen Islamic school, aligning harmoniously with the focus of the study. Ensuring a balanced gender representation, both male and female participants were selected thoughtfully, recognising the potential for differing perspectives on mobile learning. The selection process for participants in the study was carefully crafted to ensure a diverse and representative sample by integrating both random and purposive sampling methods. Initially, the first two participants were chosen based on their positions in the classroom seating plan, aimed at reflecting diversity in terms of social interactions and engagement levels, as seating often correlates with these factors. Following this, six participants were selected from the class list arranged in alphabetical order—two from the beginning, two from the middle, and two from the end. This method aimed to capture a broad spectrum of the student body, incorporating a random yet varied cross-section of names. Additionally, four participants were chosen based on their prompt response to the participation invitation, demonstrating their immediate interest and enthusiasm for the study. This selection criterion was intended to include students who showed a high level of engagement and commitment from the outset. These combined methods facilitated the creation of a balanced group, reducing potential biases and ensuring that a wide range of student experiences were represented, thereby enhancing the reliability of the study's findings. It is important that the study focused on participants in the Further Education and Training (FET) phase. This emphasis was driven by the pivotal role these grades played during and after the COVID-19 pandemic, when they experienced a notable surge in mobile and online learning.

The researcher's familiarity with the participants was respected by obtaining their contact details from the school's official database system after contacting the school administrator. This approach ensured that participants' information was gathered in an unbiased manner. The researcher's belief in the participants' ability to provide valuable insights, especially given their first-hand experience with traditional and online/mobile learning, guided the selection process.

3.5 Data Collection

McLaughlin (2016) asserts that data collection constitutes the systematic approach of measuring and gathering information from diverse sources. In the context of qualitative research, this process primarily involves methods like interviews, document analysis, observations, questionnaires, and even the integration of multimedia resources like video and audio materials to delve into the intricacies of the research problem (Creswell, 2013, p.208; Denzin & Lincoln, 2018, p.57; McMillan & Schumacher, 2010, p.327).

To maximise the reliability and accuracy of the data collected, two instruments were used. Google Forms questionnaires were utilised for data collection, benefitting from their convenience and accessibility. The use of online surveys with open-ended questions in educational research is supported by Jones et al. (2018). While the initial responses gathered through Google Forms were comprehensive, semi-structured interviews were subsequently conducted to validate and deepen the understanding of the collected data. This additional step aligned with Creswell and Plano Clark's (2018) emphasis on employing mixed methods, including interviews, to enhance the credibility of study findings.

In the present study, although the responses obtained through Google Forms were generally satisfactory and addressed all the questions, the researcher conducted follow-up semi-structured interviews to ensure the reliability and accuracy of the data collected from the online questionnaires. This additional step was taken to enhance the credibility of the study findings. The importance of using several methods, including interviews, in educational research is emphasised by (Muzari et al., 2022).

3.5.1 Online Open-Ended Questionnaires

The questionnaire played a central role as a research instrument, serving as a conduit through which data were collected to uncover insights into students' experiences with mobile learning. Drawing from the insights of Taherdoost (2019), the utilisation of a questionnaire provided a structured yet versatile approach to gather valuable information from the participants. (see Appendix F).

To gain the perspectives of participants, the questionnaire incorporated open-ended questions, a technique endorsed by Berg, et al. (2019) for its ability to reveal authentic and detailed insights. This approach allowed participants to express themselves freely, resulting in detailed responses

that captured the richness of their experiences and viewpoints. Constructed on Google Forms, the questionnaire was shared conveniently with participants via emails, leveraging the accessibility and ease of online tools. The inclusion of both short-answer and open-ended questions aimed to create a comprehensive dataset that would enable thorough analysis (Thomas et al., 2021),

The questionnaire design was informed by a comprehensive review of the literature, ensuring that it addressed crucial aspects such as challenges, benefits, and perceptions of mobile learning. It was crafted meticulously to resonate with the research objectives and to encapsulate the multifaceted nature of students' interactions with mobile learning environments.

The pilot study played a crucial role in refining the questionnaire's efficacy. Based on the feedback of two different participants, the questionnaire underwent iterative revisions, with clarity and relevance being top priorities. This iterative process, aligned with the insights of Berg et al. (2019), strengthened the structure and content of the questionnaire, enhancing its potential to elicit meaningful and insightful responses.

Importantly, the data collected from the questionnaires served as a foundation for the subsequent phase of the study – semi-structured interviews. This approach enabled the researcher to delve deeper into the participants' responses, seeking to unravel the underlying motivations, emotions, and contextual factors that shape their experiences. By combining quantitative insights from the questionnaires with qualitative insights from the interviews, the study aimed to achieve a holistic understanding of students' mobile learning encounters in Islamic high schools in the Nelson Mandela Bay District.

In the subsequent section, the research instruments used in this study are discussed, providing further insight into the methodology employed.

3.5.2 Pilot Study

As mentioned by Johnson et al. (2020), pilot studies play a crucial role in evaluating the feasibility, practicality, resource allocation, time, and cost of the main research before its implementation. The purpose of the pilot study was to assess whether the questions provided the desired answers and to identify any potential design issues.

In the present study, conducting a pilot study was particularly important to ensure that the questions were formulated in a straightforward manner, taking into consideration that not all students have English as their first language. This step aimed to gauge the comprehension levels of the questions among participants, given the linguistic diversity present. The pilot study revealed that some participants faced difficulty in understanding certain questions, as indicated by their lack of response or explicit statements expressing confusion. To address this issue, the researcher sought assistance from another individual to proofread the questions before distributing them, thereby enhancing clarity and reducing potential misunderstandings.

The pilot study involved a diverse sample of two students from Islamic high schools in the Nelson Mandela Bay District, who were not part of the main research study.

3.5.3 Semi-structured Interviews

The researcher selected four participants—two from Grade 11 and two from Grade 12—for interviews. Opting for semi-structured interviews presents the benefit of flexibility, allowing participants to share insights that they deem significant, and which might not have been recognised initially by the research team (Gill et al., 2008). The researcher wanted to conduct follow-up interviews with the four selected participants as they were on campus for another programme during the initial survey. The researcher believed that their initial answers might have been rushed, and conducting a follow-up interview provided an opportunity for them to contribute more thoughtfully in a relaxed setting. As Doyle (2019) explains, such interviews do not adhere rigidly to a predefined set of questions; rather, they encourage dynamic discussions, facilitating deeper exploration. Before conducting the interviews, all four participants were invited formally via correspondence, extending the opportunity for participation and allowing them time to prepare for articulating their viewpoints and experiences. Individual interviews were preferred to ensure an unbiased collection of information, untainted by external influences. These interviews were meticulously recorded for reference, predominantly in English.

As per Doyle (2019) an interview is characterised as a dialogue involving two or more individuals, in which the interviewer seeks information from the interviewee/s through questioning. Interviews find utility across diverse realms like counselling, journalism, psychotherapy, and research,

serving to grasp others' experiences. In this study, interviews were integrated to capture students' perspectives during the data collection phase.

The semi-structured interview format involved employing open-ended questions used for the questionnaire, guided by a flexible interview schedule. (See Appendix G). In the process, the researcher contemplated utilising online platforms like Zoom for the interviews. This approach facilitated a comfortable environment for both the researcher and participants, enabling them to engage from within their preferred settings, while also ensuring optimal time allocation of approximately 30 minutes to an hour, permitting participants to address all inquiries comprehensively. The researcher used the recording option of the Zoom application to record the interviews.

3.6 Data Analysis

Data analysis is a crucial process for examining datasets and extracting meaningful insights and conclusions from the information they contain (Duffy et al., 2019). It enables researchers to make informed decisions and reduces reliance on guesswork (Bandara et al., 2020).

For data collection in this study, the researcher embraced the versatility of online tools, selecting Google Forms as the primary instrument alongside semi-structured interviews. The choice of Google Forms was driven by its user-friendly interface and the added advantage of built-in statistical capabilities that transform responses effortlessly into insightful figures, charts, and illustrations. Complementing the structured nature of questionnaires, interviews were incorporated strategically as a subsequent step. This dual approach not only facilitated a comprehensive data collection process but also paved the way for streamlined analysis and a compelling presentation of findings.

Thematic analysis was employed to analyse the qualitative data collected in the study. The thematic analysis identified key themes related to students' experiences of mobile learning at the Islamic schools of NMBD. This approach was deemed suitable for analysing the collected data, as it aligns with the goal of understanding patterns of meaning from lived experiences (Sundler et al., 2019). The analysis process involved organising and identifying meaningful patterns in the textual data, ultimately leading to the identification of themes that captured participants' experiences and perspectives (Sundler et al., 2019).

Throughout the analysis, the researcher aimed to comprehend and describe the embedded meanings within participants' experiences. Sundler et al. (2019) emphasise the importance of gaining an understanding of the meanings derived from participants' descriptions of their experiences related to the research question.

The analysis journey begins with a deep immersion into the qualitative data. This rich tapestry, woven from Google Forms responses and semi-structured interviews, serves as the fertile ground for all subsequent stages. As advocated by Merriam (1998, p.178), this immersion fosters an intimate understanding of participants' "firsthand accounts, experiences, and perspectives", laying the foundation for a nuanced interpretation of their mobile learning journeys within the Islamic school context.

With the data thoroughly absorbed, the quest for understanding shifts towards identifying initial codes. These codes, echoing Braun and Clarke's (2006) definition, represent "discrete segments of data that carry meaning and significance" (p. 45).in relation to the participants' experiences. Each code acts as a microcosm, encapsulating the essence of the specific data segment it signifies.

As the analysis progresses, the researcher becomes a detective, searching meticulously for patterns and connections that arise organically within the coded data. These patterns, as Jacobs (2020) suggests, coalesce into preliminary themes. These themes serve as thematic clusters, grouping codes that share commonalities in concept, emotion, or dimension of the mobile learning experience. This clustering allows for a more holistic understanding of the participants' narratives, weaving together the individual threads into a richer tapestry.

However, this initial thematic map is not set in stone. To ensure validity and coherence, the identified themes undergo a rigorous review and refinement process. This critical evaluation, akin to Yin's (2009) notion of "pattern matching", guarantees that the themes accurately capture the data's essence and align seamlessly with the overarching research objectives. If discrepancies or overlaps emerge, themes are adjusted, merged, or divided carefully to ensure their internal consistency and external validity.

Each refined theme was carefully crafted and named, capturing its central essence in succinct terms. This naming and definition process adds clarity to the themes, aiding in their effective communication and interpretation.

With these defined themes in hand, the researcher weaves a coherent narrative that delves into each theme. This narrative was enriched by incorporating verbatim excerpts from participants' responses, thereby infusing authenticity and depth into the discussion.

Rigour and diligence underpin the entire analytical process. The researcher remains steadfast in identifying and addressing potential biases, while also examining interpretations critically and exploring alternative explanations for the emerging themes. This painstaking approach bolsters the credibility and trustworthiness of the findings.

The subsequent section addresses the measures taken to ensure the trustworthiness and credibility of the study.

3.7 Trustworthiness

Throughout the research process, it is essential for the researcher to represent the perspectives of the participants accurately without influencing the collected data. Carmines and Zeller (1991, p.13) emphasise the researcher's awareness of potential factors that may impact research outcomes. In the context of studying students' experiences of mobile learning in Islamic high schools in the Nelson Mandela Bay District, this study aimed to employ strategies suggested by Kyngäs et al. (2020), to ensure "trustworthiness." These strategies included accounting for personal biases, maintaining meticulous record-keeping to establish a clear decision trail, and incorporating a comparison case.

To meet the criteria of trustworthiness, as outlined by Nowell et al. (2017), this study considered the dimensions of credibility, transferability, dependability, and confirmability. It is important to note that these criteria differ from those of quantitative research, which include validity and reliability.

In order to minimise bias and to establish trustworthiness, the researcher focused on elements such as credibility, dependability, transferability, and confirmability.

Credibility pertains to the extent to which research findings faithfully represent a conceptually valid interpretation of data from participants Nowell et al. (2017). To address credibility in this study, triangulation was employed, incorporating multiple methods of data collection to enhance the validity of the research (Cohen et al., 2008). In this study, surveys with open-ended questions

and semi-structured interviews were conducted to gather data from students who presently engaged in mobile learning within Islamic high schools in the NMBD.

Dependability refers to the consistency and stability of research findings over time and across different contexts (Cohen et al., 2008). To ensure dependability in this study, surveys with open-ended questions and interviews were audio-recorded using a tape recorder, and the accuracy and authenticity of the transcripts were verified with the participants.

Conformability addresses the extent to which research findings are shaped by the perspectives and biases of the researcher Kyngäs et al. (2020). To address this, reflexivity was maintained throughout the research process, acknowledging the researcher's own perspectives and biases and how they might have influenced the findings. Member checking was also conducted, allowing participants to verify and confirm the accuracy of the data.

Transferability refers to the degree to which research findings can be applied to other contexts Kyngäs et al. (2020). While the findings of this study might not be generalisable readily to other settings or populations, they can provide valuable insights into students' experiences with mobile learning within Islamic high schools in the NMBD.

By attending to these elements, this study aimed to uphold the principles of credibility, dependability, transferability, and confirmability, thereby enhancing the trustworthiness of the research findings.

3.8 Ethical Measures

Pietilä et al. (2020) establish ethical considerations in research as a set of guiding principles, shaping the architecture and execution of research projects. They further underscore that these principles encompass aspects like voluntary engagement, informed consent, confidentiality, anonymity, addressing potential harm, and transparent communication of findings. Within this ethical framework, Palaskar (2018) emphasises the paramount importance of safeguarding research participants from any harm and of prioritising their inherent dignity. Arifin (2018) also contends that participants must provide full consent as an ethical prerequisite before initiation of the study.

Adhering meticulously to these ethical precepts, the researcher ensured the conveyance of participation details, clarifying that participants would not benefit directly from involvement and that abstention carried no disadvantages. Moreover, strict protocols for confidentiality were followed, assuring participants that only the researcher and designated team members would be privy to their involvement. Transparency underscored the voluntary nature of participation, with participants being informed that withdrawal was unrestricted and penalty-free. Alongside obtaining parental consent through detailed consent forms, the researcher also sought the assent of the minor participants themselves, ensuring they understood their role and rights in the study to reinforce their voluntary engagement. Chapter 1, Section 1.9 highlights the researcher's proactive efforts in gaining ethical approvals, secured from the College of Education's research ethics committees at the University of South Africa (UNISA), and permissions from the Human Resources department of Islamic schools in the Nelson Mandela Bay district. This comprehensive approach to ethics not only adhered to legal requirements but also promoted a respectful and responsible research environment.

Echoing Arifin's insights (2018), the resonance of ethical principles is amplified in qualitative studies, propelled by their profound investigative depth. In this milieu, the qualitative researcher shoulders the responsibility of upholding participants' autonomy, safeguarding their identities throughout, and fostering candid and unambiguous research reporting.

The meticulous observance of these ethical tenets not only upholds the credibility of research but also resonates with the values intrinsic to Islamic education. By adhering to these principles, the research underscores its dedication to trust, respect, and the genuine pursuit of knowledge.

3.9 Conclusion

This chapter presented the empirical investigation processes and the rationale for this research study. The chapter also discussed trustworthiness and ethical measures to ensure the integrity of the study.

To establish the empirical research framework, the chapter highlighted the research design, which embraced the interpretative research paradigm. The chosen research approach was qualitative, allowing for in-depth exploration of the students' experiences. Furthermore, the research type

adopted was a single case study, providing a comprehensive understanding of mobile learning in Islamic high schools.

The chapter further delved into the research methods employed, beginning with the selection of participants who represented the diverse population of Islamic high schools in the district. Detailed data collection procedures were outlined, including interviews. The questionnaires with open-ended questions and semi-structured interviews, were motivated by the need for triangulation to enhance the validity and credibility of the collected data.

In terms of data processing, the chapter described the procedures for data analysis and interpretation. Thematic analysis was employed to identify key themes and patterns within the collected data, enabling a rich and nuanced understanding of the students' experiences.

The discussion on trustworthiness and ethical measures highlighted the researcher's commitment to upholding ethical guidelines throughout the study. Ethical considerations were addressed, such as obtaining informed consent from participants, ensuring confidentiality and anonymity.

In the following chapter, an analysis of the data and a discussion of the investigation's findings are presented.

Chapter Four: Findings and Discussion

4.1 Introduction

In the preceding chapter, the researcher extensively detailed the research design and methodologies employed for this study. This chapter shifts its focus to analysing the collected data through questionnaires, aimed at addressing the research inquiries. It commences with a detailed account of the participants' profiles, followed by the presentation of key findings extracted from both questionnaires and semi-structured interviews. Notably, this empirical investigation centres around exploring students' experiences of mobile learning at Islamic high schools in the Nelson Mandela Bay district of South Africa. The chapter primarily emphasises qualitative data analysis and results, delving into the diverse experiences encountered in the realm of mobile learning within these educational settings.

4.2 General Participant Information

The biographical details presented in Table 1 were provided by the participants, including their age, place of attendance, nationality, gender, and grade. These details played a crucial role in providing context for the study.

Table 1: Biographical Details of Participants

| Name | Age | Gender | Grade | Site of engagement | Participants of Interview |
|---------------|-------|--------|-------|--------------------|---------------------------|
| Participant 1 | 14-15 | Female | 10 | Urban | |
| Participant 2 | 14-15 | Male | 10 | Urban | |
| Participant 3 | 16-17 | Female | 11 | Urban | ✓ |
| Participant 4 | 16-17 | Female | 11 | Urban | |
| Participant 5 | 14-15 | Male | 10 | Urban | |
| Participant 6 | 16-17 | Female | 12 | Urban | |

| Name | Age | Gender | Grade | Site of engagement | Participants of Interview |
|-----------------------|------------|---------------|--------------|---------------------------|----------------------------------|
| Participant 7 | 16-17 | Male | 11 | Urban | ✓ |
| Participant 8 | 16-17 | Male | 12 | Urban | |
| Participant 9 | 16-17 | Female | 12 | Urban | ✓ |
| Participant 10 | 14-15 | Female | 10 | Urban | |
| Participant 11 | 16-17 | Male | 12 | Urban | ✓ |
| Participant 12 | 16-17 | Male | 11 | Urban | |

As highlighted in Chapter 3, Section 3.4, although the researcher initially aimed to include two Islamic schools in the Nelson Mandela Bay District (NMBD) for both questionnaires and interviews, logistical constraints allowed for data collection at only one of the schools.

The data presented in Table 1 unveils a diverse participant composition, encompassing students enrolled at an Islamic school in the Nelson Mandela Bay District (NMBD). Intentionally seeking comprehensive and varied insights, the researcher deliberately selected participants from various phases of the Further Education and Training phase (FET).

The participants' ages ranged from 14 to 17, encompassing students in Grades 10 through 12. Employing a deliberate approach, reflected in the tabulated distribution, ensured a balanced representation across genders. This method involved recruiting an equal number of male and female participants from each grade level. The objective was to facilitate a comprehensive exploration of both male and female viewpoints regarding their encounters with mobile learning. This was crucial as it allowed the study to capture a diverse range of experiences and perceptions, which could highlight any differences or similarities in how male and female students utilize and benefit from mobile learning technologies. Understanding these nuances was vital for developing more effective and inclusive mobile learning strategies that cater to the specific needs and preferences of all students, thereby enhancing the educational outcomes for both genders. The inclusion of students in FET the phases, along with a careful selection of participants, aimed to

enrich the analytical depth of the study and to broaden the potential applicability of findings. Furthermore, the age and grade distribution of participants ensured a representative sample that encompasses various stages of high school education, enhancing the study's capacity to capture a holistic portrayal of mobile learning experiences.

4.3 Presentation of the Findings from the Questionnaires and Interviews

This segment of discourse explores the discernible outcomes elicited from the administered questionnaires. The principal objective underpinning this study was to unravel meticulously the multifaceted tapestry of students' encounters within the realm of mobile learning, specifically in the Islamic schools situated in the purview of the Nelson Mandela Bay District (NMBD), as expounded upon in Chapter 3, Section 3.2. To this end, an intricate methodological design was orchestrated, in which the deployment of open-ended questionnaires occurred via the digital medium of emails, and the participants were engaged through the use of Google Forms. A dedicated timeframe of two weeks was afforded to participants to complete and submit their questionnaires.

The participants, in adhering to the open-ended format of the questionnaire, contributed insightful narratives, which were duly captured and catalogued on Google Forms. The culmination of these responses crystallised into the emergence of four overarching thematic constructs, inherently rooted in resonance with the research question. Subsequent to the comprehensive acquisition of the dataset through the questionnaires via Google Forms, a unique identifier, in the form of numerical enumeration, was attributed to each participant's dataset. This facilitated the systematic alignment of participants' responses, enabling a coherent chronicle of their perspectives.

After the questionnaires were completed, the researcher conducted interviews with a small sample of four students. To maintain consistency in the responses, the same questions used in the questionnaires were employed during these follow-up interviews. The interviews, detailed in Appendix G, were part of a sequential process following the questionnaire stage conducted via Google Forms (see Appendix F). Each participant was anonymised and assigned a unique numerical code corresponding to their responses.

The research questions were crafted precisely to extract comprehensive feedback from the participants. The resulting research themes, derived from both the posed questions and the thorough analysis of the questionnaires, are delineated in Table 2.

4.3.1 Research Themes

Table 2: Research Themes

| Research Themes | Research Questions | Questions to Participants |
|--|--|--|
| 1 Usage of mobile devices for learning | 1.How do students at Islamic high schools in the NMBD use mobile devices for learning? | 1.How frequently do students at Islamic schools in NMBD use mobile devices (smartphones or tablets) for educational purposes? |
| 2 Usefulness of mobile learning in comparison to traditional classroom learning. | 2.How do students at these schools perceive the usefulness of mobile learning in comparison to traditional classroom learning? | 2.How has mobile learning influenced your learning experience of students at Islamic institutions of NMBD in comparison to traditional classroom learning? |
| 3 Challenges faced using mobile learning | 3. What challenges do students face when using mobile technology? | 3.What challenges, if any, have students at Islamic schools in NMBD encountered while using mobile devices for learning, and how did you overcome them? |
| 4 Benefits offered by mobile learning in Islamic schools | 4. What do students perceive as the benefits of using mobile learning? | 4.What are the benefits of mobile learning in Islamic schools? |
| 5 Guidelines used to implement mobile learning | 4.What guidelines can teachers follow to ensure adequate and fair implementation of mobile learning in these schools? | 5.What guidelines did the teachers at Islamic schools in NMBD follow to ensure adequate and fair implementation of mobile learning in these schools? |

The following section presents the participants' perspectives and opinions on the research themes.

4.3.1.1 Theme 1: Usage of Mobile Devices for Learning

The first theme investigated the usage of mobile devices for learning among students in Islamic schools in NMBD. It was necessary to explore this to understand how it influenced the research problem and subsequent questions. This theme had three sub-themes: 1: The type of mobile devices used; 2: The types of activity done on mobile devices; and 3: Cost effectiveness of mobile learning. These sub-themes are discussed in detail below where the questionnaire and interview responses of participants are discussed in greater depth.

In relation to this main theme, these questions were posed: i) How frequently do students at Islamic schools in NMBD use mobile devices (smartphones or tablets) for educational purposes? ii) What types of educational activity do you usually engage in using your mobile device?

Participants 2, 3, 5, and 6 reported an almost daily usage of mobile devices for learning, while participants 1 and 4 expressed a negative view regarding the use of mobile devices for learning. In addition, participants 8 and 9 identified themselves as neutral users, incorporating mobile devices into their learning routines several times a week. Below, the insights and discussions stemming from the four interviewees' responses to this theme are outlined.

Participant 1 stated, '*I rarely use mobile devices for educational purposes*', suggesting a limited reliance on technology for learning.

Participant 2 mentioned, '*I engage with educational content on a daily basis*', indicating a more frequent utilisation of mobile devices.

Participant 3 reported, '*I use them every day*', signifying a high level of integration of technology in their learning routine.

Participant 4 described their usage as based on need, mentioning, '*I use mobile devices for educational purposes a few times a month*'.

Participant 5 stated, *'I utilise mobile devices daily'*, demonstrating a consistent reliance on technology for learning.

Participant 6 highlighted the significance of mobile devices, saying, *'my mobile device is essential for tasks from research to communication with peers and teachers'*, emphasising its indispensable role, especially in handling complex concepts.

Participant 7 described their usage as moderate, stating, *'I engage with mobile devices for educational purposes about three to four nights a week'*.

Participant 8 specified, *'I concentrate my usage on weekends'*, indicating a specific timeframe for integrating technology into their learning routine.

Participant 9 mentioned, *'I resort to mobile devices when I can't find answers in physical books'*, suggesting a supplementary role for technology in their learning process.

Participant 10's response indicated near-daily usage, with exceptions during holidays, emphasising the consistency of their interaction with educational content through mobile devices.

Participant 11 described themselves as another daily user, stating, *'I use mobile devices as an integral part of my learning experience'*.

Finally, Participant 12 reported, *'I use mobile devices several times a day'*, illustrating a frequent and regular reliance on technology for learning.

While Islamic schools in the NMBD region traditionally operate on campus, there has been a notable trend among participants indicating the integration of mobile devices into their educational activities for learning purposes. For instance, Participant 5's daily use of mobile devices exemplifies a consistent reliance on technology for learning. In addition, several participants expressed support for the integration of mobile devices into their learning routines, while others mentioned infrequent usage, restricted to weekends. It is interesting that some participants highlighted the convenience of online tools when faced with challenges in finding answers in physical books, emphasising the supplementary role of digital resources in their studies. This aligns with research showing the increasing adoption of mobile devices in educational settings for improved access to information and learning resources (Johnson et al., 2020) The initial theme encompasses various sub-themes related to the utilisation of mobile devices for learning. These

will be explored below, contributing significantly to addressing the primary inquiries and fulfilling the objectives of the study. These sub-themes emerged from the participant questionnaires and evolved as the researcher delved into the data. They align closely with the central concept of the main theme, each highlighting a unique aspect within the broader theme.

Table 3: Sub-themes on the Usage of Mobile Devices for Learning

| Research Sub-themes on the Usage of Mobile Devices for Learning | Questions to Participants |
|--|--|
| 1a: The type of mobile devices used | Which mobile devices do you use most for your learning? |
| 1b: The type of activities done on mobile devices | What type of activities do you do on your mobile devices for learning? |
| 1c: Cost effectiveness of mobile learning | Did you find mobile learning cost effective? |

4.3.1.1.1 Sub-theme: The Type of Mobile Devices Used

This theme explored the diverse range of mobile devices employed for learning purposes, aiming to investigate both the advantages and disadvantages associated with different devices in mobile learning contexts. All 12 participants engaged with this theme, providing their responses to the inquiries posed.

Participant 1 stated, *‘I primarily use a Samsung Galaxy tablet for my studies. It’s convenient and has a good screen size for reading textbooks and taking notes’*.

Participant 2 mentioned that *‘I’m an avid iPhone user. The iOS ecosystem really helps me stay organised with my study apps and resources. I also have an iPad for more detailed research work’*.

Participant 3 indicated that *‘I prefer using my Google Pixel smartphone. The Android platform is user friendly, and I find it easy to access my course materials and educational apps’*.

Participant 4, in contrast, stated: *'I have a Microsoft Surface Pro, which I find incredibly versatile. It's like having a laptop and tablet in one, which is perfect for both note-taking and more intensive research tasks'*.

Participant 5 indicated, *'I use a Huawei Mate Pad for all my educational needs. It has a fantastic display and is great for both reading e-books and working on projects'*.

Participant 6 stated: *'I rely on my MacBook Air for most of my coursework. The larger screen is helpful when I'm working on complex assignments, and it's also easy to switch between different applications'*.

Participant 7 mentioned, *'I use a OnePlus smartphone for quick reference and communication with my classmates. For more in-depth research, I have a Lenovo Yoga Tab that's perfect for reading and annotating articles'*.

Participant 8 indicated, *'I'm a dedicated iPad user. Its portability and extensive range of educational apps make it an indispensable tool for my studies'*.

Participant 9 stated, *'I prefer using a Google Pixel smartphone. It's reliable, and I can access all my study materials on the go'*.

Participant 10 mentioned, *'I have a Dell Inspiron laptop that's my go-to for all things related to my studies. It's powerful enough for research work and for running software for my courses'*.

Participant 11 stated, *'I use a Samsung Galaxy Note smartphone along with a Lenovo Tab. The combination allows me to stay organised and efficient in my studies'*.

Participant 12 mentioned, *'I primarily use an iPad Pro. Its large screen size and compatibility with the Apple Pencil make it an excellent tool for notetaking and working on design projects'*.

Participants emphasised distinctive features influencing their selection of devices. Notably, ease of use emerged as a crucial factor, aligning with the focus of the TAM (technology acceptance model) theory on perceived ease of use. Participants have also lauded the convenience and optimal screen sizes offered by devices like Samsung Galaxy tablets, Huawei Mate Pad, and iPads, particularly for reading, project work, and note-taking. This preference for user-friendly features corresponds to the TAM's emphasis on the perceived ease of use as a determinant of technology acceptance (Davis, 1989). In addition to that, ecosystem benefits played a pivotal role in

participants' device preferences, showcasing a connection to the concept of networks in connectivism theory. For instance, users of iOS devices, such as iPhones and iPads, appreciated the seamless integration and organisational advantages within the Apple ecosystem. This echoes the connectivist perspective, emphasising the importance of networks and connections in the learning process (Siemens, 2005). By acknowledging the participants' considerations through the lens of TAM and connectivism, this discussion underscores the theoretical framing that informs the study's exploration of mobile learning experiences. Versatile devices like the Microsoft Surface Pro were noted for dual laptop–tablet functions, suitable for diverse tasks. Google Pixel smartphones were praised for their user-friendly access to course materials and apps. Larger screens in MacBook Air and Dell Inspiron laptops were commended for handling complex assignments and running course software.

Unique device combinations, like Samsung Galaxy Note smartphones with Lenovo Tab, were seen as efficient study aids. Last, devices like the iPad Pro with Apple Pencil were appreciated for seamless notetaking and design work. These varied preferences reflect individual needs, showcasing how device features impact study habits and learning experiences.

4.3.1.1.2 Sub-theme: The Type of Activities Done on Mobile Devices

All 12 participants responded to the question “What types of activity do you do on your mobile devices for learning?” Their responses are as follows:

Participant 1 stated, *‘I mainly use my mobile device for reading e-books and taking notes. It’s incredibly convenient and helps me stay organised’*.

Participant 2 indicated, *‘my mobile device is my go-to for accessing course materials, checking schedules, and using educational apps. It’s like my portable classroom’*.

Participant 3 was also one who explored the use of it for different activities: *‘I use my mobile device for a range of activities, including watching educational videos, participating in online discussions, and accessing digital resources’*.

Participant 4 mentioned, *‘my device is essential for research. I use it to access academic journals, online databases, and to search for relevant articles and papers’*.

Participant 5 emphasised the importance of collaboration and projects by stating, *'I often use my mobile device for collaborative projects with classmates. We use various apps for brainstorming, document sharing, and virtual meetings'*.

Participant 6 indicated, *'in addition to reading e-books and accessing lecture materials, I also rely on my mobile device for quick research and referencing during assignments'*.

Participant 7 also added that their mobile phone is a communication hub by stating, *'my mobile device is my communication hub. I use it for group discussions, messaging classmates, and collaborating on group projects'*.

Participant 8 indicated, *'I find my mobile device invaluable for language learning apps and for accessing online language resources and practice exercises'*.

Participant 9 stated: *'I use my mobile device for quick fact-checking, looking up definitions, and accessing supplementary materials related to my courses'*.

Participant 10 stated: *'I rely on my device for coding exercises and programming assignments. It's like having a mini development environment in my pocket'*.

Participant 11 indicated, *'I often use my mobile device for virtual simulations and interactive learning experiences, especially in science and engineering courses'*.

Participant 12 stated: *'my mobile device is indispensable for design work. I use it for sketching, digital design tools, and accessing design tutorials'*.

It is clear from the information above that Participants 1, 2, and 6 primarily use mobile devices for studying, focusing on accessing course materials, staying organised, and quick referencing. In contrast, for instance, the activities reported by Participants 3, 4, and 5, such as watching educational videos, conducting research, and collaborating on projects with classmates, demonstrate their engagement with a broader range of learning experiences, emphasising connections and networks – a concept which can be considered as part of the connectivist theory (Siemens, 2005). For instance, Participant 7 highlights the significance of the device for communication and collaboration, further underscoring the connectivist aspects of their mobile learning practices. Participant 8 specifically emphasises the use of language learning apps and resources, showcasing a distinct application of mobile technology in the learning process (Graham

et al., 2012). These diverse activities collectively contribute to a comprehensive understanding of mobile learning within the study.

4.3.1.3 Sub-theme: Cost effectiveness of Mobile Devices for Learning

The consideration of cost effectiveness when purchasing devices is crucial, particularly in the realm of mobile learning. This is imperative as it directly impacts the accessibility and affordability of technology for users, aligning with the overarching goal of promoting equitable and inclusive educational practices. The researcher aimed to examine the concerns surrounding the expenses associated with devices in the context of mobile learning. The diversity of available devices, each with its unique functions, often presents a significant importance in mobile learning environments. Moreover, beyond cost, the study sought to explore how device functionalities assist in educational experiences and learning outcomes, aiming to identify optimal devices that balance affordability with efficiency in supporting learning activities. The responses of the participants are summarised below.

Participant 1: *‘using a mobile device for learning has been a game-changer in terms of affordability. Instead of investing in multiple textbooks, I can access digital resources for a fraction of the cost’.*

Participant 2 stated: *‘mobile learning has saved me a significant amount of money. I no longer need to purchase physical copies of books or pay for printing. Everything I need is conveniently accessible on my device’.*

Participant 3 mentioned their initial concern and stated: *‘initially, I was concerned about the cost of acquiring a suitable mobile device. However, in the long run, it has proven to be a cost-effective choice. I can access a wide range of educational materials without additional expenses’.*

Participant 4 indicated, *‘the initial investment in a quality mobile device is outweighed by the savings on textbooks and printing costs. Additionally, the versatility of a mobile device means it serves multiple purposes beyond learning’.*

Participant 5 also had a similar answer to Participant 4, stating, *‘I’ve noticed a significant reduction in expenses since I switched to mobile learning. The ability to download e-books and resources for free or at lower costs has made a positive impact on my budget’.*

Participant 6 mentioned, *‘while purchasing a mobile device may seem like a substantial expense, it has ultimately proven to be a cost-effective choice. The convenience and accessibility of digital resources outweigh the initial investment’*.

Participant 7 mentioned that *‘mobile learning has been a cost-effective solution for me. I no longer have to allocate a substantial portion of my budget to purchasing physical textbooks. Digital resources are often more affordable and readily available’*.

Participant 8 indicated, *‘I’ve found mobile learning to be a budget-friendly option. The accessibility to a wide range of free and discounted educational apps and resources has significantly reduced my overall learning expenses’*.

Participant 9 mentioned that *‘investing in a mobile device for learning was a wise financial decision. Not only have I saved money on textbooks, but I also have access to a wealth of online resources that are often more affordable or even free’*.

Participant 10 indicated, *‘the initial cost of a mobile device may be high, but the long-term savings are substantial. I no longer need to purchase physical textbooks, and I have access to a wealth of online resources that are often more affordable’*.

Participant 11 stated: *‘mobile learning has been a cost-effective option for me. The ability to access a wide range of educational materials online has significantly reduced my expenses on physical textbooks and other learning resources’*.

Participant 12 also mentioned the fact that with mobile learning one can have a number of books on just one device and stated, *‘using a mobile device for learning has proven to be cost-effective. I’ve seen a noticeable reduction in my expenses on textbooks and other educational materials’*.

In addition, the convenience of having everything on one device is invaluable. Moreover, it was a judicious decision for the researcher to conduct interviews following the questionnaires. The interviews proved to be a valuable indicator of obtaining clear and more positive answers from the participants. Altogether, this approach has contributed significantly to the richness and accuracy of the data. From the insights gathered, it is apparent that participants perceived mobile learning as cost effective, particularly concerning the purchase of materials for their courses. Participants 1 to 6 noted initial challenges in acquiring mobile devices but highlighted the long-term advantage

of saving on additional expenses for physical textbooks. They expressed contentment with utilising digital books instead. Participant 9 viewed investing in a mobile device as a wise financial decision, emphasising its value.

Furthermore, Participants 10, 11, and 12 echoed satisfactions with the abundance of educational tools available on mobile devices. Participants 3, 7, 9, and 11 were more explicit in their responses during the interviews. Although these participants generally provided the same responses as in the questionnaires, they elaborated in the interviews, making it easier for the researcher to understand. For instance, Participant 3 expressed concern about purchasing an expensive device for mobile learning but added that it was a good choice as it increases the quality of learning. Participant 3 also mentioned in the interview that educational apps have been helpful for their learning, indicating satisfaction with the technologies used for mobile learning. This contribution of the interviews was essential, since initially, Participant 3 did not mention that, despite the initial perceived expense, investing in a new device is beneficial in the long run.

The participants' responses were in line with the connectivism theory, emphasising the importance of mobile devices and using educational tools to enrich learning, showcasing the richness. Their positive sentiments align with the notion that mobile learning not only presents cost savings by replacing physical materials but also offers a rich array of educational resources, enhancing the overall learning experience (Davis, 1986; Siemens, 2004).

4.3.1.2 Theme 2: Usefulness of Mobile Learning in Comparison to Traditional Classroom Learning.

This second theme aimed to identify participants' perceptions of the usefulness of mobile learning in comparison to traditional classroom learning. As discussed below, a significant majority of participants favoured mobile learning for its comfort and convenience. Conversely, a few participants expressed a preference for traditional classroom learning, cherishing the face-to-face interactions with peers and teachers.

The participants were asked, how has mobile learning influenced your learning experience of students at Islamic institutions in NMBD in comparison to traditional classroom learning?

Participant 1 responded *‘I find mobile learning to be incredibly effective. It allows me to study at my own pace, and I can revisit materials whenever I need. In a traditional classroom, I might miss out on important details’*.

Participant 2 and Participant 3 stated, *‘For me, traditional classroom learning is more effective. I thrive in a structured environment where I can interact with the instructor and my peers. Mobile learning sometimes feels isolated’*.

Participant 4 added, *‘I’ve had success with both, but mobile learning is my preference. It’s convenient and allows me to explore additional resources online. In a classroom, I’m limited to what’s covered in lectures’*.

Participants 5, and 6 and 9 stated: *‘traditional classroom learning is more effective, in my opinion. There’s a sense of accountability, and I’m less likely to procrastinate. Mobile learning sometimes leads to distractions’*.

Participant 7 mentioned that *‘both have their pros and cons. Mobile learning is fantastic for self-paced study, but it lacks the interactive element of a classroom. In a traditional setting, I benefit from face-to-face interactions’*.

Participants 8 and 9 also indicated that *‘mobile learning suits my lifestyle. I can study from anywhere. However, in a classroom, I feel more engaged and motivated to participate actively in discussions’*.

Participants 10,11 and 12 had the same answer, stating *‘I’ve found both to be effective, but mobile learning offers more flexibility. I can tailor my study routine to my preferences. However, the classroom environment is crucial for hands-on activities and group projects’*.

The responses demonstrate a diverse range of opinions regarding the usefulness of mobile learning compared to traditional classroom learning. While some participants value the flexibility and accessibility of mobile learning, others prefer the structured and interactive nature of classroom education. Johnson et al. (2021) conducted a case study aimed at enriching learning through the integration of technology within South African high schools. On the other hand, Sharples et al. (2021) highlight that students with older or less powerful devices may encounter difficulties using certain mobile learning applications or resources, resulting in unequal learning experiences. It is

evident that both approaches have their strengths, and the choice between them depends on individual learning styles and preferences. Therefore, a blended approach which incorporates the benefits of both mobile and classroom learning could potentially offer a balanced and effective educational experience for students in the Islamic schools of NMBD.

4.3.1.3 Theme 3: Challenges Faced Using Mobile Learning.

Participants were queried about challenges faced by students at Islamic schools in NMBD while using mobile devices for learning and how they surmounted these obstacles. The third theme explored these specific challenges encountered in the mobile learning process in an Islamic school in NMBD.

Below, the detailed responses of the participants regarding these challenges are discussed.

Participant 1 pointed out, *'occasional technical glitches, especially during video lectures, disrupted my learning flow. I also faced screen fatigue and eye strain from extended study sessions on my mobile device'*. This explains that connectivity is an issue for mobile learning especially while streaming online classes.

Participant 2 mentioned, *'I faced challenges with distractions and maintaining focus while using my mobile device for learning. Notifications and social media often diverted my attention from educational tasks. Additionally, I encountered occasional compatibility issues with certain educational apps'*. This shows that mobile devices can also be distractive also.

Participant 3 shared similar views as Participant 1: *'connectivity issues on my mobile device occasionally hindered my ability to access course materials in real-time. I also faced concerns regarding storage constraints due to limited space for downloading and storing large educational resources'*.

Participant 4 acknowledged, *'while my mobile device is versatile, it has limitations for more complex tasks. Engaging in detailed research work and extensive typing for assignments was challenging on my device'*. This shows that some devices are not user friendly and can be a bit tiring while using them.

Participant 5 indicated, *'screen fatigue and occasional technical glitches were significant challenges during extended mobile device use for learning, impacting the quality of my online*

learning experience'. this explains that fast connectivity is very important for online and mobile learning experience.

Participant 6 highlighted, *'loadshedding posed a substantial challenge, causing frequent disruptions in my online classes and study sessions. Additionally, occasional technical difficulties with my mobile device were encountered'*. This explains very well that power outages can be disruptive for mobile learning and that institutions need to prioritise this issue to overcome such challenges, such as having generators and uninterruptible power supplies.

Participant 7 expressed the view that *'distractions, particularly notifications and social media, occasionally hindered my focus on educational tasks. I also faced compatibility issues with certain educational apps'*.

Participant 8 complained that *'multitasking on my mobile device was challenging, impacting my efficiency as I found it difficult to have multiple applications open simultaneously'*. Participant 9 acknowledged, *'While valuing the convenience of mobile learning, occasional technical glitches disrupted my online classes. I also had concerns about storage limitations'*.

Participant 10 found that *'engaging in more complex tasks, like detailed research work, was challenging on my mobile device. Certain activities were better suited for a traditional computer'*.

Participant 11 reported, *'occasional technical glitches, screen fatigue, and eye strain were challenges during video lectures and online discussions, especially during prolonged study sessions'*.

Participant 12 noted, *'occasional connectivity issues affected my participation in real-time online discussions. Distractions from notifications and social media were also concerns'*.

It was clear that participants at an Islamic school in NMBD encountered several challenges when using mobile devices for learning. Technical issues, distractions from notifications and social media, connectivity problems, device limitations, and physical strain, such as screen fatigue and interruptions owing to power disruptions were common hurdles. Notably, Participant 3 echoed a prevalent sentiment consistent with Chapter 2, Section 2.5, emphasising the significance of internet connectivity as a primary challenge in mobile learning. These challenges affected the learning

experiences of students, highlighting the diverse difficulties associated with mobile learning in this context.

The research theme explores challenges encountered in mobile learning. This segmentation illustrates distinctly that students in Islamic schools in NMBD were grappling with a variety of challenges throughout their mobile learning experiences. These challenges encompassed diverse aspects, including technical issues, connectivity issues, and the need for additional support and resources. The exploration of these challenges provides valuable insights into the complex landscape of mobile learning in Islamic schools, paving the way for targeted interventions and improvements in the implementation of mobile learning strategies.

4.3.1.4 Theme 4 Benefits Offered by Mobile Learning in Islamic Schools

In this section, participants were questioned about the benefits they derived from mobile learning in an Islamic school setting, resulting in diverse responses. The incorporation of mobile devices into the learning process has yielded transformative advantages, enhanced accessibility, and provided tailored benefits to meet the unique requirements of Islamic schools. Recognising the need to explore these advantages, the researcher investigated the varied benefits of mobile learning in the study.

Participants 1, 2 and 3 agreed that *‘mobile learning has allowed us to access Islamic resources and texts at any time. This means we can engage with religious studies more consistently and on a more personal level’*.

In addition, Participant 4 was impressed with the certain religious applications by stating that *‘Islamic apps and resources on my mobile device have been instrumental in helping me keep up with my religious studies. The convenience of having everything in one place is invaluable’*.

Participant 5 highlighted the ability to connect with Islamic scholars online, emphasising, *‘with mobile learning, we can connect with renowned Islamic scholars through online lectures and discussions. This opens up a world of knowledge that may not have been accessible otherwise, emphasizing the importance of connectedness and networking in the mobile learning experience’*.

This aligns with the theory of connectivism, which frames this study (Siemens, 2005). Participant 7 pointed to daily prayers by stating that *‘mobile learning has made it convenient to engage in*

daily reflections and spiritual practices. Having access to Islamic apps and reminders on my phone has been a significant aid in my spiritual journey’.

Participants 6,7,10 and 12 indicated, *‘through mobile learning, we have the opportunity to participate in virtual study circles and discussions with fellow students. This communal aspect enhances our learning experience and allows us to grow together in our faith’.*

The benefits highlighted by participants demonstrate unmistakably that certain learners value the advantages of mobile learning. They believe it simplifies specific practices, such as having religious and educational applications accessible on mobile devices. This aligns with the literature discussed in Chapter 2, Section 2.4 of this study.

4.3.1.5 Theme 5: Guidelines Used to Implement Mobile Learning

In this study, participants were asked about the specific guidelines utilised by teachers at Islamic schools in NMBD to ensure proficient and impartial integration of mobile learning. As revealed by the participants, these guidelines played a crucial role in ensuring fair implementation of mobile learning. The process of introducing mobile learning is complex, requiring meticulous planning, consideration of various factors, and the application of effective guiding principles. These guidelines serve as a navigational tool for educators and institutions, ensuring the smooth integration of mobile learning into the educational framework. When asked about the guidelines followed by teachers for implementing mobile learning in these schools, four of the 12 students stated they were unaware of such guidelines. Some participants, though, cited a diverse range of guidelines utilised by the teachers.

Participant 1 mentioned, *‘one crucial guideline was ensuring that all course materials were accessible on multiple device types and screen sizes. This meant optimising content for smartphones, tablets, and laptops to accommodate different student preferences’.*

Participants 3, 4 and 5 stated that *‘providing clear instructions on how to navigate the mobile learning platform and access resources was a key guideline. This reduced confusion and enabled students to focus on the content rather than technical hurdles’.*

Participants 4, 8 and 9 mentioned, *‘incorporating interactive elements like quizzes, discussion boards, and multimedia content was important for engagement. These features encouraged active participation and fostered a sense of community among students’*.

Participant 11 suggested, *‘integrating collaborative tools, such as group projects and virtual study groups, promoted peer interaction and collaborative learning. This guideline emphasised the importance of social engagement in the mobile learning environment’*. These guidelines represent a collective effort to create an effective and inclusive mobile learning environment. They encompass technical considerations, user experience, content accessibility, engagement strategies, and ongoing feedback mechanisms. By adhering to these guidelines, educators and institutions can optimise the mobile learning experience for diverse student populations.

The researcher sought to uncover fresh perspectives on mobile learning experiences among students, aiming to introduce innovative suggestions and practices into educational institutions. The pursuit of new ideas, such as exploring novel mobile learning resources, is crucial for advancing mobile learning and enhancing learning experiences for future generations, as advocated by Johnson and Smith (2022).

Participant 1 stated, *‘one improvement I’d suggest is the integration of interactive quizzes and assessments within the mobile apps. This would allow for real-time feedback and help in reinforcing our understanding of the subject matter’*.

Participant 2 was more into visual elements in exploring mobile learning by indicating, *‘incorporating multimedia elements, like videos and interactive simulations, can make the learning experience more immersive. This visual aspect can greatly enhance comprehension and retention of complex concepts’*.

Participants 3, 4, 5 and 6 mentioned that *‘having a seamless offline mode would be a significant improvement. This would allow us to access course materials even in areas with limited or no internet connectivity, which is especially crucial for remote students’*.

Participants 7 and 8 suggested that *‘regular updates and improvements to the user interface and overall user experience would go a long way in keeping the platform engaging and user friendly’*.

Participant 9 mentioned that *‘implementing a feature for instant access to a glossary or dictionary within the app could be immensely helpful for clarifying unfamiliar terms or concepts’*.

Participant 10 suggested that *‘including a progress tracker or dashboard that shows our performance and completion status for various modules or courses would provide a sense of accomplishment and motivation’*.

Participant s11 and 12 stated: *‘having a discussion forum or Q&A section directly integrated into the mobile app would encourage more interaction and knowledge sharing among students’*.

These insightful responses highlight the participants’ perspectives on potential improvements in mobile learning. Their suggestions encompass interactive elements, multimedia integration, customisation options, collaborative features, and device compatibility, all of which could contribute to a more enriching and effective learning experience. These enhancements align with the broader goal of leveraging technology to elevate educational outcomes (Litman & Robinson, 2020). Some participants suggested the discussion forums and Q&A section, which can be a good idea to explore mobile learning. Participants suggested the idea of a seamless offline mode. This feature, especially beneficial for disadvantaged students, allows them to access resources freely without an internet connection. The researcher believes that this can assist students significantly who do not always have internet connectivity.

This study research theme of guidelines used to implement mobile learning had one sub-theme, which is indicated in Table 4, and suggest that guidelines used to implement mobile learning helped for better implementation of mobile learning at Islamic schools of NMBD.

Table 4.: Strategies to be Used for Fair Implementation of Mobile Learning

| Research Sub-theme | Question to Participants |
|---|--|
| 1.Strategies to be used for fair implementation of mobile learning. | What strategies do you think can be used in Islamic schools for better implementation mobile learning? |

4.3.1.5.1 Sub-theme: Strategies to be Used for Fair Implementation of Mobile Learning

Fair implementation of mobile learning is paramount to ensure that all students have equal access to educational resources and opportunities. This involves the development and application of strategies that address potential barriers and disparities among students. By employing these strategies, educators can create an inclusive learning environment which caters to diverse needs and circumstances. The researcher felt it was necessary to investigate the strategies that can be used for fair implementation of mobile learning.

Participants 1, 2, 4 and 11 stated that they were happy with the current strategies for fair implementation of mobile learning at the Islamic schools of NMBD. On the other hand, Participants 3, 5 and 6 indicated that providing options for offline access to course materials was a crucial strategy. They mentioned ensuring that students without consistent internet connectivity could still engage with the content on their devices.

Participants 7 and 8 suggested that offering multiple formats for content, such as text, audio, and video, catered to different learning preferences and abilities. This strategy acknowledged that students have diverse ways of processing information.

Participant 9 observed that creating opportunities for peer mentoring and support networks was crucial. This strategy fostered a sense of community among students, ensuring that they could rely on each other for assistance and motivation.

Participants 10 and 12 indicated that establishing a transparent and flexible assessment process was important for fairness. This included providing clear grading criteria and accommodating students who might require alternative assessment methods.

Based on the data provided within this theme, it became evident that instructors should address several aspects and employ diverse strategies for the fair implementation of mobile learning. These strategies encompass access, communication, customisation, support, and assessment, all pivotal in ensuring an equitable learning experience for every student. Integrating these strategies into mobile learning initiatives enables educators to establish an environment fostering success for all participants. This approach resonates with the principles of inclusive education, advocating for equal access and opportunities among diverse student populations.

4.4 Conclusion

This chapter presented the insights gathered from the questionnaires and semi-structured interviews administered to students in an Islamic school in NMBD. It is worth noting that the varied perspectives on the utilisation of mobile devices for learning were not the primary focus. The data collected revealed that mobile learning in Islamic schools offers both advantages and limitations. Many students expressed gratitude for the school's support in providing necessary resources. The convenience of attending classes from the comfort of one's home is a significant benefit, highlighting the cost effectiveness of this approach, with all required materials readily accessible. However, some students mentioned a sense of isolation owing to the absence of in-person interaction with peers.

This underscores the importance of experts proficient in digital resources when implementing new guidelines and strategies in education. The subsequent chapter will provide a summary of findings and offer recommendations based on the research.

Chapter Five: Summary, Conclusions and Recommendations

5.1 Introduction

The collected data was analysed, presented, and interpreted in the previous chapter. This chapter summarises the study's findings, conclusions, and recommendations. The study was conducted at one of the Islamic schools in NMBD, aiming to explore students' experiences with mobile learning.

This final chapter serves as an encapsulation of the entire study. It reflects on the critical elements addressed in the research and highlights differences and similarities uncovered between the literature review and the empirical study concerning students' experiences with mobile learning in Islamic high schools in the NMBD. Conclusions about the findings, themes, and sub-themes that emerged will be drawn based on the research questions, corresponding to the research objectives outlined in Chapter 1, Section 1.5. In addition, this chapter provides recommendations based on the findings, followed by study limitations and suggestions for future research.

5.2 Summary of Literature Review

Chapter 1 explores the role of mobile learning in Islamic high schools in South Africa's Nelson Mandela Bay District. It highlights the advancements in mobile technology that have expanded its educational uses, emphasizing the unique challenges and opportunities within Islamic schools where cultural and religious values influence technology adoption. The chapter also examines the impact of the COVID-19 pandemic on mobile learning, emphasizing its critical role in continuing education remotely.

Chapter 2 of this study laid a theoretical and methodological foundation by reviewing relevant literature. The chosen theoretical frameworks, connectivism and TAM (technology acceptance model), were clarified in the context of mobile learning experiences in Islamic high schools in the NMBD. These frameworks were selected based on their suitability for exploring students' experiences with mobile learning in this specific context (Kivunja, 2018).

The study also explored two pertinent educational policies: the 2014 UNESCO Guidelines for Mobile Learning and the Institutional Mobile Learning Policy of Islamic schools. These policies

were essential in shaping the principles and decisions influencing the educational landscape, aligning with the laws and regulations governing educational systems (Wandasari et al., 2019).

By addressing the benefits of mobile learning, the study sought to discern the most effective means of course delivery via mobile platforms. Notably, students were found to engage in global interactions through group discussions and private chats, with unlimited access to study materials. This aligns with findings by Blakey and Major (2019), who emphasised the collaborative nature of mobile learning, encouraging deeper understanding and practical applications of course concepts (Raj, 2021). The examination of challenges associated with mobile learning provided valuable insights into the hurdles faced by students and educational institutions during its implementation (Simamora, 2020). Understanding these challenges serves as a foundation for future success in mobile learning endeavours.

Furthermore, the study underscored the importance of support systems for students, emphasising that those in need of assistance, particularly troubled students, should receive tailored support to enhance their educational experience (Owolabi, 2020). To this end, governments and education providers were urged to equip instructors and students with standardised home-based learning tools, offer online teacher training, and promote academic research in online education, with a focus on aiding students with mobile learning difficulties (Huang et al., 2020).

As argued by Hodges et al. (2020) in Chapter 2, Section 2.6, in light of the COVID-19 pandemic, the study also examined the impact of mobile learning. Recognising that some students experienced mobile learning exclusively during this period, it became crucial to consider their perspectives. The literature review emphasised that mobile learning could foster creativity, serving as a motivational factor. Conversely, a lack of motivation may hinder the ability of students to engage effectively with educators and peers.

In summary, Chapter 2 provided a review of relevant literature, anchoring the study in established theories and relevant educational policies. It highlighted the benefits and challenges of mobile learning, stressed the importance of support systems for students, and acknowledged the unique motivational aspects associated with mobile learning, particularly in the context of the COVID-19 pandemic.

5.3 Summary of Empirical Study

The study adopted an interpretivist research paradigm to gain insight into the phenomenon under investigation by examining the experiences and perspectives of the participants through the chosen data collection methods. Furthermore, as affirmed in Chapter 3, Section 3.3.1, this research employed a qualitative approach to construct descriptions and comprehension that could be applied effectively to the context of the study. This qualitative research used an online questionnaire featuring open-ended queries, administered through Google Forms, and distributed via email. In addition, semi-structured interviews were conducted to gather data. The strategies and protocols for data collection, storage, and analysis were delineated in Chapter 3, Section 3.5

The researcher utilised purposive sampling, specifically focusing on high school students from Islamic schools in the NMBD area. By deliberately selecting students from diverse backgrounds, the aim was to identify distinct case scenarios. Moreover, participants were chosen based on their gender as well as grades to gain comprehensive insights into their encounters with mobile learning from varying standpoints, as discussed in Chapter 1, Section 1.8.1. This indicates that the researcher purposefully selected participants who were anticipated to furnish the most pertinent information for this study owing to their collective experiences with online education, particularly during the COVID-19 pandemic (Rahiem, 2020).

To summarise, the principal tool for gathering data was online questionnaires, strategically designed to affirm and validate participants' responses. This study encompassed 12 individuals from an Islamic high school in NMBD. Of these 12 students, four were interviewed as well, which was the precise number initially intended. All 12 participants confirmed their willingness to participate in questionnaires, and thereafter, four of them agreed to take part in the interviews. Only four were invited for the interviews, and all four accepted, resulting in the study being carried out with the entire group. Each participant brought a unique level of experience with online learning, and their selection was based on availability and convenience.

The study further provided an exploration of the elements contributing to trustworthiness, including credibility, dependability, transferability, and confirmability (Chapter 3, Section 3.7). Ethical considerations and measures were expounded upon in Chapter 3, Section 3.8, highlighting the ethical principles guiding the research. The Islamic institution administration granted access to the students both Islamic high school and to their policy. (Appendices C and I). In addition, UNISA granted ethical clearance to the researcher as a duly registered university student (Appendix G).

The research findings, detailed in Chapter 4, were organised into themes and sub-themes derived from participant responses. Each theme and sub-theme was thoroughly examined and interpreted. The first theme in Chapter 4 Section 4.3.1.1 focused on the usage of mobile devices for learning.

Participants noted that mobile learning provided a more cost-effective and efficient means of studying. They found it convenient and time-saving, especially for accessing educational materials from home through online resources. However, some participants faced challenges related to insufficient data and connectivity issues, particularly in areas prone to load shedding. Several participants also encountered difficulties in collecting data owing to limited resources at home. Participants also expressed varying opinions on the effectiveness of online versus on-site learning.

While some students adapted successfully to mobile learning, others found it overwhelming, as they believed that more content was available online compared to traditional classrooms. Some participants viewed mobile learning as a new and unfamiliar experience, leading to uncertainty about how to benefit from it fully. Notably, some participants only became aware of mobile learning during the COVID-19 pandemic. They also raised concerns about the disadvantages of online and mobile learning, including feelings of isolation owing to reduced interaction with teachers and peers. Load shedding emerged as a significant hindrance to learning, with some students unable to afford power banks or backup devices to sustain mobile learning connectivity.

From the first theme, three sub-themes emerged: i) The type of mobile devices used, ii) The type of activities done on mobile devices, iii) Cost effectiveness of mobile learning.

The first sub-theme about the types of mobile devices used reveal a nuanced understanding of their technological preferences and their impact on the learning experience. The participants in this study displayed a diverse array of preferences, ranging from smartphones to tablets and laptops, each chosen for its unique attributes and functionalities. Some participants favoured tablets for their portability and optimal screen size, which facilitated tasks like reading textbooks and taking notes. Others expressed a strong affinity for specific operating systems, with iPhone users praising the iOS ecosystem for its organisational capabilities and accessibility to educational resources. Similarly, Android enthusiasts appreciated the user-friendly platform for seamless access to course materials and educational apps. Moreover, the choice of hybrid devices, such as the Microsoft Surface Pro, showcased participants' recognition of the value of versatility in their learning tools, allowing for both note-taking and more intensive research tasks. These individualised selections

highlight the significance of tailoring device choices to suit individual learning styles and preferences, ultimately shaping the quality and efficiency of their educational endeavours. This aligns with broader discussions on the importance of personalised learning experiences in the digital age (Freire & Macedo, 1999, p. 48).

The second sub-theme – the types of activity done on mobile devices – is presented in Chapter 4. Section 4.3.1.1.2, explores the activities conducted on mobile devices constituting a pivotal aspect of understanding the multifaceted nature of mobile learning experiences. The participants in this study engaged in a diverse range of activities using their preferred mobile devices, showcasing the versatility of this platform for educational pursuits. For instance, some participants utilised their mobile devices for reading digital textbooks and taking notes, leveraging the convenience and portability offered by these tools. Others emphasised the benefits of specific ecosystems, such as iOS, for organising study materials and accessing educational resources. In addition, the Android platform was lauded for its user-friendly interface, facilitating easy access to course materials and educational applications. These individualised approaches to utilising mobile devices for learning underscore the adaptability and customisation that this platform affords to students. By tailoring their device choices to suit their specific academic requirements, participants were able to optimise their learning experiences. These observations resonate with existing literature, which underscores the transformative potential of mobile learning in fostering self-driven, interactive, and flexible educational experiences (Jawad & Shalash, 2020). Moreover, studies have highlighted the importance of considering individual preferences and needs when integrating technology into educational environments (Mohd Yunus, 2010).

The final sub-theme, cost effectiveness of mobile learning, discussed in Chapter 4 Section 4.3.1.1.3 explores participants' perspectives on the cost effectiveness of mobile learning, offering valuable insights into their considerations when adopting this mode of education. Many participants acknowledged that mobile learning was perceived as a more economical option compared to traditional methods. They noted that it eliminated expenses associated with commuting, physical textbooks, and additional materials. This was particularly significant for participants who faced budget constraints or who lived in areas with limited access to educational resources. However, a few participants also raised concerns about the potential hidden costs, such as the need for reliable internet connections and access to updated devices. These considerations shed light on the

multifaceted nature of cost effectiveness in mobile learning, emphasising the need for comprehensive planning and support structures to ensure that all students can engage fully in this mode of education. These observations align with existing research that underscores the potential cost savings associated with mobile learning, particularly in terms of reduced transportation and material expenses (Bull et al., 2017). However, it is also crucial to acknowledge and address potential barriers that may hinder equitable access to mobile learning opportunities (Traxler, 2018). This includes ensuring that students have access to affordable and reliable devices and internet connectivity.

The subsequent section offers a concise summary of the key points elucidated in Chapter 4 pertaining to the second theme of this study. The theme was unaccompanied by a sub-theme. It reported on the usefulness of mobile learning as opposed to the traditional classroom environment – a critical inquiry for researchers seeking a comprehensive comparison to inform their own perspectives. As revealed, a significant majority of participants favoured mobile learning for its comfort and convenience. Conversely, a select few participants expressed a preference for traditional classroom learning, cherishing the face-to-face interactions with peers and teachers. The researcher examined this theme to appraise the preference and efficacy of mobile learning vis-à-vis traditional classroom instruction. Among the 12 participants, 10 provided insightful feedback, offering a rich array of perspectives on the strengths and weaknesses of each approach. These valuable insights are succinctly summarised below.

The next section presents a summary of the third theme in the study, extensively discussed in Chapter 4, Section 4.3.1.3, and it does not include any sub-themes.

In this section of the study, participants shared insights into the challenges they faced while engaging in mobile learning within Islamic schools in NMBD. The responses highlighted a spectrum of difficulties, ranging from technical glitches and distractions to connectivity issues and device limitations. Screen fatigue and interruptions owing to power disruptions were also notable concerns. These challenges collectively underscore the complex landscape of mobile learning experiences in Islamic schools. Common themes included the need for reliable internet connectivity and additional support to navigate technical obstacles. The diverse range of difficulties emphasises the multifaceted nature of implementing mobile learning strategies in this context. The findings provide valuable insights for educators and institutions aiming to enhance

mobile learning experiences. Targeted interventions and improvements in addressing technical issues, connectivity constraints, and distractions can contribute to a more effective and seamless integration of mobile learning in Islamic schools in NMBD.

The next section will provide a summary of the fourth theme in the study, exploring the benefits offered by mobile learning in Islamic schools. This theme is elaborated on further in Chapter 4, Section 4.3.1.4, and it did not include any sub-themes.

This section explores participants' views on the benefits of mobile learning in Islamic schools, yielding diverse insights. The incorporation of mobile devices in learning brings transformative advantages, enhancing accessibility, and catering to the unique needs of Islamic education. Participants expressed varied experiences, emphasising the anytime access to Islamic resources, personalised engagement in religious studies, and the invaluable convenience of consolidated materials through dedicated applications. Connectedness and networking emerged as key themes, with participants highlighting the ability to connect with Islamic scholars online. This emphasises the broader impact of mobile learning on knowledge acquisition and networking. Participants also noted the role of mobile learning in facilitating daily reflections, spiritual practices, and prayers through Islamic applications. The communal aspect of virtual study circles and discussions further enriched the collective learning experience, fostering growth in faith.

In essence, participants showcased an appreciation for the advantages of mobile learning, simplifying practices, in alignment with existing literature. Their diverse perspectives offer a comprehensive understanding of the multifaceted benefits experienced in Islamic schools through mobile learning integration.

The final theme in Chapter 4 explored the guidelines used for implementation and suggestions to improve mobile learning, underpinned by the sub-theme of strategies for ensuring its fair implementation. This endeavour was motivated by the researcher's aim to discern the guidelines employed in integrating mobile learning in the Islamic schools of NMBD. Through the adoption of these guidelines, an environment of mutual development and accountability is cultivated between teachers and students, in which students assume responsibility for their learning and engage proactively with educators when needed (Smith, 2022). Consequently, the study recognised a need to introduce fresh guidelines to enhance the implementation of mobile learning in the Islamic schools of NMBD, constituting one of the central themes of inquiry.

The landscape of education in the 21st century is shaped profoundly by the pervasive use of mobile learning and online services. This necessitates the formulation of new guidelines to align with evolving technological advancements which, in turn, influence the delivery and accessibility of educational content. Hence, ensuring the fair implementation of mobile learning is pivotal in affording all students uniform access to educational resources and opportunities. To this end, participants in this study preferred a spectrum of strategic recommendations that coalesce into a robust framework for the equitable deployment of mobile learning. These recommendations span vital dimensions including accessibility, communication, customisation, support, and assessment. One pivotal strategy entail ensuring offline access to course materials, thereby enabling students with intermittent internet connectivity to engage effectively. In addition, participants underscored the importance of providing content in diverse formats – encompassing text, audio, and video – to accommodate the varied learning preferences and capabilities among participants. A tiered support system for addressing technical issues was also deemed indispensable, recognising the diverse levels of technological proficiency among students. Furthermore, transparent guidelines for inclusive communication and discussion forums were identified as pivotal in nurturing a positive online learning community. Tailoring learning paths to align with individual preferences and progress was advocated as a key means of fostering personalised learning experiences. The study also highlighted the significance of addressing accessibility needs for students with disabilities through regular assessments and targeted interventions. The establishment of avenues for peer mentoring and support networks was viewed as instrumental in nurturing a sense of community and mutual assistance among students. Finally, ensuring a transparent and adaptable assessment process, inclusive of alternative methods for students with specific requirements, was underscored as an imperative for safeguarding fairness. The integration of regular surveys and feedback sessions was recommended to refine the mobile learning experience iteratively, attuning it to the evolving needs of students. Collectively, these multifaceted strategies coalesce into a comprehensive blueprint for the equitable implementation of mobile learning, emblematic of the principles of inclusive education that strive to furnish equal access and opportunities to a diverse cohort of students.

5.4 Synthesis of Research Findings

This section serves as a critical synthesis, harmonising the research findings with the established literature. In Chapter 4, Section 4.3.1.2, the research underscores the cost-saving, time-efficiency, and enhanced comfort that students derive from mobile learning, particularly in the context of studying from the familiarity of their homes. Al Azhar (2020) substantiates this observation, affirming that mobile learning offers a more economically accessible and convenient option for students in the Islamic school system. This convergence is notably congruent with the observations put forth by Maatuk et al. (2022) in their comprehensive study on the benefits of mobile learning, as discussed in Chapter 2, Section 2.4. Nevertheless, an intriguing paradox emerges regarding personal interactions. As elucidated in Chapter 2, Section 2.5, it is apparent that students may grapple with a sense of isolation owing to the comparatively restricted channels for direct engagement with peers, instructors, and mentors within the mobile learning milieu. This underscores the nuanced interplay between the advantages and potential drawbacks of mobile learning, presenting a complex narrative that warrants careful consideration and reflection in the broader discourse on contemporary education. Despite these resonances, discrepancies emerge in the context of the policies governing mobile learning in Islamic schools, as explained in Chapter 2, Section 2.3.1.2. These policies encompass comprehensive student support mechanisms, ranging from technological guidance for learning and teaching to technical assistance with the online delivery system, and also extend to the management of mobile learning initiatives within these educational institutions. However, participants highlighted a notable gap in the actual implementation of these provisions, indicating room for improvement in the technical support infrastructure for mobile learning.

In light of these considerations, it is imperative to dissect both the benefits and constraints of mobile learning comprehensively. This approach allows for a balanced understanding of the potential advantages offered by mobile learning, as well as a critical appraisal of its limitations, thereby fostering a more informed and discerning perspective on its integration within the educational landscape. This synthesis underscores the dynamic interplay between empirical findings and established literature, illuminating areas of accord and discord that enrich the broader discourse on mobile learning in Islamic schools.

5.5 Conclusions

This section encompasses the research conclusions in alignment with the study's overarching aim and objectives. The primary objective of this study has been to explore the experiences of students engaging with mobile learning in Islamic high schools in the NMBD. To address this, the research endeavour was structured around four pivotal sub-questions, all of which collectively underpinned the central research question, explicitly outlined in Chapter 1, Section 1.4:

1. How do students at Islamic high schools in the NMBD use mobile devices for learning?
2. How do students at these schools perceive the usefulness of mobile learning in comparison to traditional classroom learning?
3. What challenges do students face when using mobile technology?
4. How do students at Islamic schools' benefit from mobile learning?
5. What guidelines can teachers follow to ensure adequate and fair implementation of mobile learning in these schools?

Each of these questions, substantiated by themes and sub-themes derived from the rich tapestry of participant responses, will be discussed in the ensuing sections, facilitating a comprehensive synthesis of the research findings.

5.5.1 Research Sub-question One: How Do Students at Islamic High Schools in the NMBD Use Mobile Devices for Learning?

Based on the findings from the responses of participants, students at Islamic high schools in the NMBD employ mobile devices for learning in multifaceted ways. The participants explained that mobile devices serve as versatile tools for accessing educational content and resources. They highlighted using mobile devices for tasks such as reading digital textbooks, taking notes, engaging with online lectures, conducting research, and completing assignments. In addition, students frequently utilise mobile devices for communication and collaboration related to their coursework, including interactions with peers and teachers through various digital platforms. Moreover, participants underscored the convenience and flexibility afforded by mobile devices, allowing them to engage in learning activities both within and outside the confines of traditional classroom settings. This adaptability aligns with the evolving nature of education, emphasising the pivotal

role that mobile technology plays in facilitating seamless and dynamic learning experiences for students in Islamic high schools in the NMBD.

5.5.2 Research Sub-Question Two: How Do Students at These Schools Perceive the Usefulness of Mobile Learning in Comparison to Traditional Classroom Learning?

Based on the responses of participants, students at these schools perceive mobile learning as highly effective compared to traditional classroom learning. They emphasised several key advantages of mobile learning.

First, the findings showed that mobile learning provides a level of convenience and flexibility that is not achievable in traditional classroom settings. This includes the ability to access educational materials and to engage in learning activities from the comfort of their own homes, which was particularly valued, especially during the COVID-19 pandemic.

Second, mobile learning fosters self-driven learning and expresses that the autonomy afforded by mobile devices enables students to set their own learning pace and style. This aligns with the notion that mobile learning empowers students to take control of their educational journey.

Furthermore, the findings revealed the accessibility and ease of information retrieval facilitated by mobile devices. This emphasised that digital resources are readily available and searchable, allowing for efficient and immediate access to course materials, which can enhance overall learning experiences.

However, it is important to note that, while participants expressed strong preferences for mobile learning, a few acknowledged the value of traditional classroom learning, particularly in terms of face-to-face interactions with peers and teachers. This indicates that there are still aspects of the traditional learning environment that hold significance for some students.

In summary, the findings underscore the usefulness of mobile learning, particularly in terms of flexibility, autonomy, and accessibility of educational resources. These advantages were viewed as highly beneficial and conducive to a productive learning experience.

5.5.3 Research Sub-Question Three: What Challenges Do Students Face When Using Mobile Technology

Based on the responses of participants from Islamic high schools in the NMBD, it is evident that students encounter a range of challenges when utilising mobile devices for learning. These challenges impact their motivation, engagement, and ultimately, their learning outcomes significantly. Technical issues and connectivity problems were recurrent themes, with students facing occasional disruptions owing to glitches and connectivity issues. Moreover, participants voiced concerns about the potential for distractions and a lack of focus, as the same devices used for learning also provide access to notifications and social media, diverting their attention. Prolonged use of mobile devices led to physical discomfort, characterised by screen fatigue and eye strain, which, in turn, could hinder sustained engagement with course materials. Load shedding was one of the main problems that was raised by some participants. In addition, the limited opportunities for personal interaction within the mobile learning environment were viewed as a source of isolation, potentially impacting motivation and overall engagement. Participants also identified limitations in multitasking abilities on mobile devices, which could affect their efficiency in handling diverse tasks. For students with disabilities, there were concerns about the accessibility of mobile learning platforms, potentially resulting in barriers to engagement and learning outcomes. Finally, storage constraints were mentioned, particularly in terms of downloading and storing large educational resources. These collective challenges emphasise the need for thoughtful strategies and support systems to enhance the mobile learning experience for students in Islamic high schools.

5.5.4 Research Sub-Question Four: What Do Students Perceive as the Benefits of Using Mobile Learning?

In conclusion, this chapter delineated the varied advantages of mobile learning in the context of an Islamic school, drawing insights from participants who expressed a range of benefits. The incorporation of mobile devices into the educational process has proven to be transformative, improving accessibility, and addressing the distinctive needs of Islamic education. The study revealed a spectrum of advantages, encompassing the capability to access Islamic resources at any time, engage with scholars online, and participate in virtual study circles, all contributing to a more individualised and communal learning experience.

Responses from participants underscored the convenience and efficacy brought about by mobile learning, facilitating consistent involvement in religious studies, daily reflections, and spiritual practices. The importance of having comprehensive Islamic applications and resources readily accessible on mobile devices was highlighted, streamlining the learning process and fostering a deeper connection with faith. The convergence of participant perspectives and the literature review supports the assertion that mobile learning plays a pivotal role in advancing the academic and spiritual development of learners in Islamic schools. This chapter underscores the concrete advantages of mobile learning and lays the groundwork for further exploration and comprehension in subsequent sections of the study.

5.5.5 Research Sub-Question Five: What Guidelines Can Teachers Follow to Ensure Adequate and Fair Implementation of Mobile Learning in These Schools?

Participants provided valuable insights into the guidelines that can be adopted by teachers to ensure the adequate and fair implementation of mobile learning in Islamic high schools in the NMBD. First, they emphasised the importance of providing options for offline access to course materials. This strategy ensures that students without consistent internet connectivity can still engage with the content on their devices. Second, offering multiple formats for content, such as text, audio, and video, caters to different learning preferences and abilities. This approach acknowledges that students have diverse ways of processing information. Third, implementing a tiered support system for technical issues is crucial. This ensures that students with varying levels of tech proficiency receive the assistance they need to navigate the mobile learning platform. Fourth, establishing clear guidelines for inclusive communication and discussion forums was identified as a key strategy. This encourages respectful and constructive interaction among students, creating a positive online learning community. In addition, customising learning paths based on student preferences and progress was highlighted as an effective strategy. This allows for individualised learning experiences, ensuring that each participant can focus on areas most relevant to them. Furthermore, regular assessment and addressing of accessibility needs for students with disabilities were deemed a priority. This strategy aims to remove barriers and to provide equal access to educational content and resources. Last, creating opportunities for peer mentoring and support networks was viewed as crucial. This fosters a sense of community among students, ensuring that they can rely on each other for assistance and motivation. These guidelines contribute collectively to a comprehensive

framework for the fair implementation of mobile learning, addressing various aspects including access, communication, customisation, support, and assessment. By integrating these strategies into mobile learning initiatives, educators can create an environment where all participants have the opportunity to thrive and succeed. This approach aligns with the principles of inclusive education, promoting equal access and opportunities for diverse student populations.

Main research question: What are the experiences of students towards mobile learning in Islamic high schools in the NMBD?

The experiences of students towards mobile learning in Islamic high schools in the NMBD are multifaceted. Participants highlighted several positive aspects of mobile learning, including its cost effectiveness, convenience, and the comfort it offers by allowing them to study from their own homes. They appreciated the accessibility of course materials and the user-friendly nature of the platforms provided by the schools. However, there were also challenges reported, particularly related to technical issues, screen fatigue, and occasional connectivity problems. Some students expressed a sense of isolation owing to the limited personal interactions in the mobile learning environment. Despite these challenges, participants recognised the potential of mobile learning to enhance their educational experiences, provided that adequate support and guidelines are in place. This suggests a generally favourable attitude towards mobile learning, tempered by the need for targeted improvements in its implementation.

5.6 Limitations of the Study

Systematic bias, as defined by Ross and Bibler Zaidi (2019), refers to limitations within a study design or instrument that a researcher may not have been able to control completely, potentially influencing the results. In this study, one noteworthy limitation was the inclusion of only one Islamic school in the region. It is recognised that results might vary in different contexts, as other schools may have adopted distinct strategies in implementing mobile learning. However, despite this, the primary objective was to attain an in-depth understanding of students' experiences with mobile learning in Islamic high schools in the NMBD. The researcher contends that the study contributed significantly to this endeavour.

Despite the limitation mentioned above, it is believed that this study yielded valuable insights, enriching the existing body of knowledge in the domain of mobile learning.

The study's sample size, comprising 12 participants from one of the Islamic schools in the NMBD, was relatively modest. Consequently, there are limitations regarding the extent to which the findings can be extrapolated to a larger population. Moreover, the research predominantly employed qualitative methods. While this approach facilitated an in-depth exploration of participants' experiences, it may have constrained the ability to quantify certain aspects of the findings.

5.7 Recommendations

As elucidated by Miles et al. (2018), research recommendations serve as valuable suggestions to enhance the research field, derived from the results obtained. They not only aid in comprehending the broader context but also illuminate potential avenues for future improvements based on the research findings. In this study, research insights were gleaned through online open-ended questionnaires and semi-structured interviews. Drawing from these findings, this research proffers recommendations aimed at refining the experiences of students with mobile learning in Islamic high schools in the NMBD. These recommendations are poised to serve as guiding principles for Islamic schools in the NMBD.

5.7.1 Recommendations to Management of Islamic Schools in NMBD

In order to enhance the seamless integration of mobile learning in Islamic schools, several pivotal recommendations have surfaced. First and foremost, the researcher recommends that it is imperative to establish well-defined mobile learning policies, encapsulating device usage, content accessibility, and robust technical support. Equally vital is the provision of comprehensive professional development opportunities for educators, thereby augmenting their proficiency in harnessing mobile technology for effective pedagogy. Creating inclusive learning environments, with a special emphasis on accessibility for all students, including those with disabilities, guarantees a fair and equitable educational experience.

Moreover, fostering collaborative learning through group projects, online forums, and shared platforms engenders a sense of camaraderie among students. The continuous assessment of mobile learning initiatives, coupled with insightful feedback from students, serves as a dynamic tool for refining strategies over time. Addressing connectivity challenges and providing offline resources becomes instrumental for students grappling with limited internet accessibility.

To bolster these efforts, it is advised that school management ensures the ICT department is equipped adequately and poised for forthcoming technological advancements. Furthermore, recognising the pivotal role of parental involvement in mobile learning, efforts should be made to engage parents actively and to furnish them with guidelines on responsible screen-time management. Staying abreast of technological advancements and aligning mobile learning initiatives with broader educational objectives ensures a seamless learning experience for all students.

Last, integrating mobile devices into traditional classroom settings is advised to prepare and involve all students in mobile learning, given the ubiquity of mobile devices among the student body.

5.7.2 Recommendations to Teachers

Teachers play a pivotal role in the success of mobile learning initiatives. To maximise its impact, teachers should first familiarise themselves with mobile learning platforms and tools. It is crucial to create inclusive content that caters to diverse learning styles and abilities. Continuous professional development is key for educators to stay abreast of technological advancements. By embracing ongoing learning, teachers can enhance their proficiency and effectiveness in integrating mobile learning into their teaching practices. Establishing a supportive learning community is equally important. This involves facilitating peer interactions and creating ample opportunities for questions and discussions.

Maintaining open communication with students is the cornerstone of a successful mobile learning environment. Addressing any technical or content-related challenges promptly ensures a smooth learning experience for students. In a nutshell, by implementing these recommendations, teachers can establish a dynamic and effective mobile learning environment, fostering a positive and engaging learning environment.

5.7.3 Recommendations to Students

Students should embrace mobile learning for an enhanced educational experience, create a quiet, distraction-free space and establish a regular study routine. They should prioritise time management, engagement with content, and utilise diverse resources on their mobile device.

Students should stay organised, participate in online discussions, seek help when needed, take breaks, and prioritise well-being for a sustainable and enriching learning experience.

5.8 Suggestions for Further Research

The scope of this research study, which focused on the experiences of mobile learning among students in Islamic schools of NMBD, was confined to a sample size of 12 participants. To broaden the scope and gather a more diverse range of perspectives, it is recommended that future researchers engage in qualitative studies across various Islamic schools in different regions. In addition, for a comprehensive assessment of mobile learning effectiveness, researchers could extend their investigations to non-Islamic schools. This research highlights challenges in the implementation of mobile learning, warranting further exploration of students' experiences in this domain.

Furthermore, future studies may delve deeper into the integration of augmented reality (AR) and virtual reality (VR) technologies in mobile learning in Islamic high schools. Understanding how these immersive technologies can be assimilated effectively into the curriculum to amplify engagement, interactivity, and comprehension among students presents a promising area for exploration. Moreover, investigating the potential benefits and challenges of AR and VR applications in Islamic educational contexts offers valuable insights for educators and policymakers aiming to harness advanced technologies for elevated learning outcomes. Such research endeavours promise to enrich our understanding of the dynamic landscape of mobile learning in religious education settings.

5.9 Conclusion

This study was conducted with the purpose of delving into the experiences of mobile learning among students in Islamic schools within the NMBD region. Twelve (12) participants were engaged in this qualitative inquiry, with data gathered through a combination of an online questionnaire and semi-structured interviews. These participants represented a range of grade levels from Grade 10 to 12 in Islamic schools.

After completing the data collection process using Google Forms for the questionnaires, interviews were recorded and transcribed. Subsequently, a thematic analysis approach was employed to extract key themes and to generate the findings. The insights gathered from the participants reflected a diverse range of preferences. Some students expressed a preference for mobile learning, citing its comfort, ease of use, cost effectiveness, and time-saving benefits. Conversely, others leaned towards traditional classroom settings, valuing the interpersonal interactions with peers and teachers.

In conclusion, this research offers a comprehensive examination of student experiences with mobile learning in Islamic high schools in the NMBD region. The findings illuminate the multifaceted dynamics of mobile learning, encompassing its advantages, challenges, and potential areas for enhancement. Mobile learning was shown to provide significant benefits, including cost effectiveness, convenience, and accessibility, corroborating previous research (Al Azhar Institute, 2020; Maatuk et al., 2022). However, it also brought to light challenges tied to limited personal interactions and technical support, indicating areas warranting focused attention in mobile learning implementations.

Furthermore, this study emphasises the critical role of tailored guidelines in integrating mobile learning effectively. Recommendations encompass establishing clear policies, facilitating professional development for educators, fostering inclusive environments, and promoting collaborative learning. These guidelines serve as a navigational compass for Islamic schools in the NMBD region, enabling them to harness the full potential of mobile learning for their students.

As with any study, it is important to acknowledge its limitations. The research was geographically confined to a specific region and involved a relatively small sample size, potentially impacting the broad applicability of the findings. The study also relied predominantly on qualitative methodologies, limiting the ability to quantify certain aspects of the findings.

To address these limitations, future research endeavours could extend their geographical reach, encompassing a more diverse array of Islamic schools and regions. Furthermore, the incorporation of quantitative methodologies alongside qualitative approaches would furnish a more holistic comprehension of mobile learning experiences. In addition, the exploration of emergent technologies such as augmented reality (AR) and virtual reality (VR) within mobile learning contexts stands as an intriguing avenue for further research.

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Appendices

Appendix A: Request for Permission to Conduct Research

Request for permission to conduct research at xxx (names removed to protect the anonymity of the institution)

Title of the title of your research: Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District.)

Date: 2024/01/24

Mr Hoosen

Department of Human Resources at xxx (names removed to protect the anonymity of the institution)

Contact details:

Email: mhso@alzharinstitute.co.za

Cell: 041 457 15 04

Dear Mr xxx (names removed to protect the anonymity of the institution)

My name is Yasin Gul, a Master of Education in Open Distance Learning student at the University of South Africa (UNISA). Under the guidance of Prof. Geesje van den Berg and Prof. Patience Kelebogile Mudau, both esteemed members of the academic community at UNISA, I am embarking on a research endeavour aimed at exploring the **Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District**.

The aim of this study is to explore the experiences of students with mobile learning in Islamic high schools within the NMBD.

Your school has been chosen because it represents an integral part of the Islamic educational landscape in the Nelson Mandela Bay District. Given its diverse student body with Islamic backgrounds, it is particularly well-suited for the focus of my research.

The study will involve administering an online questionnaire to 12 students: 4 from grade 10, 4 from grade 11, and 4 from grade 12. The questionnaire will be distributed electronically. Following this, interviews will be conducted via the Zoom application.

This study offers several benefits to the participants. It provides students with a deeper understanding of mobile learning in the context of both Islamic education and conventional schooling. Additionally, it empowers learners to enhance their proficiency in utilising digital applications effectively.

There are no physical risks associated with participating in this research. Both the questionnaire and interview processes will be conducted under careful supervision.

Please note that there will be no monetary reimbursement or incentives for participation.

Regarding feedback, I plan to visit the school to deliver a presentation on the entire research process. Furthermore, the outcomes of the study will be shared with the school, and students are welcome to attend the presentation.

Thank you for your cooperation and support in this research endeavour.

Yours sincerely

Researcher's signature: _____

Researcher's name: _____

Position _____

Contact details: _____

Appendix B: Letter Requesting Parental Consent for Minors to Participate in a Research Project

Letter Requesting Parental Consent for Minors to Participate in a Research Project

Dear Parent

Your child is invited to participate in a study entitled **Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District**.

I am undertaking this study as part of my master's research at the University of South Africa. The purpose of the study is to explore mobile learning in Islamic institutions of Nelson Mandela Bay District and the possible benefits of the study are the improvement of knowledge on mobile learning and learning with more effectively through making use of mobile devices. I am asking permission to include your child in this study because I need to have several students from an Islamic school. I expect to have 11 other children participating in the study.

If you allow your child to participate, I shall request him/her to:

Participate in an online questionnaire and an interview, both of which will be conducted online, allowing your child to participate from home. The questionnaire will be administered using Google Forms, and your child will receive the questionnaire link via email. Following the completion of the questionnaires, the interviews will be conducted through the Zoom application. Each interview is expected to take approximately 30-45 minutes. Please note that the interviews will be recorded using Zoom's built-in recording feature. Your permission to record the interviews is kindly requested. The interviews will be conducted simultaneously with other participants.

Any information that is obtained in connection with this study and can be identified with your child will remain confidential and will only be disclosed with your permission. His/her responses will not be linked to his/her name or your name or the school's name in any written or verbal report based on this study. Such a report will be used for research purposes only.

There are no foreseeable risks to your child by participating in the study. Your child will receive no direct benefit from participating in the study; however, the possible benefits to education are he/she will improve their knowledge on mobile learning and will be able to make use of electronic devices for better educational purpose. Neither your child nor you will receive any type of payment for participating in this study.

Your child's participation in this study is voluntary. Your child may decline to participate or to withdraw from participation at any time. Withdrawal or refusal to participate will not affect him/her in any way. Similarly, you can agree to allow your child to be in the study now and change your mind later without any penalty.

The study will take place during home time for students' convenience. In addition to your permission, your child must agree to participate in the study and you, and your child will also be asked to sign the assent form which accompanies this letter. If your child does not wish to participate in the study, he or she will not be included and there will be no penalty. The information gathered from the study and your child's participation in the study will be stored securely on a password locked computer in my locked office for five years after the study. Thereafter, records will be erased.

The benefits of this study are that your insights will contribute to a comprehensive understanding of mobile learning practices, your knowledge on mobile learning will enhance.

As for potential risks, I assure you that your involvement will not impose any disadvantages or negative consequences upon you.

There will be no reimbursement or any incentives for participation in the research.

If you have questions about this study, please ask me or my study supervisor, Prof, Van den Berg or Prof Kabelegile Patience Mudau, Department of curriculum studies, College of Education, University of South Africa. My contact number is _____ and my email is _____. The email of my supervisor is _____. Permission for the study has already been given by principal of the school and the Ethics Committee of the College of Education, UNISA.

You are making a decision about allowing your child to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. You may keep a copy of this letter.

Name of child:

Sincerely

Parent/guardian's name (print) Parent/guardian's signature: Date:

Researcher's name (print) Researcher's signature Date:

Appendix C: Assent Letter

Letter Requesting Assent from Learners in a Secondary School to Participate in a Research Project

Title of research: Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District

Dear Participant

I am doing a study on Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District as part of my studies at the University of South Africa. Your principal has given me permission to do this study in your school. I would like to invite you to be a very special part of my study. I am doing this study so that I can find ways that you can use mobile learning much better in your school. This may help you and many other learners of your age in different schools.

This letter is to explain to you that what I would like you to do. There may be some words you do not know in this letter. You may ask me or any other adult to explain any of these words that you do not know or understand. You may take a copy of this letter home to think about my invitation and talk to your parents about this before you decide if you want to be in this study.

Your role as a student at an Islamic high school renders your experiences and perspectives invaluable to this study. Your participation as a key informant is instrumental in advancing our understanding of mobile learning within the Islamic school context.

To facilitate this research, an online questionnaire comprising open-ended questions will be employed. The questionnaire will be distributed via email, and your participation signifies your consent to take part in the study. The questionnaire is designed to explore topics related to the challenges and benefits of mobile learning at Islamic schools in the NMBD. Your responses will be collected using Google Forms, ensuring your confidentiality.

The estimated time required to complete the questionnaire is approximately 30 minutes.

I will write a report on the study, but I will not use your name in the report or say anything that will let other people know who you are. Participation is voluntary, and you do not have to be part of this study if you don't want to take part. If you choose to be in the study, you may stop taking part at any time without penalty. You may tell me if you do not wish to answer any of my questions. No one will blame or criticise you. When I am finished with my study, I shall return to your school to give a short talk about some of the helpful and interesting things I found out in my study. I shall invite you to come and listen to my talk.

While your participation will not yield direct benefits, your insights will contribute to a comprehensive understanding of mobile learning practices, your knowledge on mobile learning will enhance.

As for potential risks, I assure you that your involvement will not impose any disadvantages or negative consequences upon you.

You will not be reimbursed or receive any incentives for your participation in the research.

If you decide to be part of my study, you will be asked to sign the form on the next page. If you have any other questions about this study, you can talk to me or you can have your parent or another adult call me at 076 361 7551. Do not sign the form until you have all your questions answered and understand what I would like you to do.

Researcher Name: _Yasin Gül_____ Contact details of researcher: _076 361 7551

Signature: _____

Do not sign the written assent form if you have any questions. Ask your questions first and ensure that someone answers those questions.

Written Assent

I have read this letter which asks me to be part of a study at my school. I have understood the information about my study, and I know what I will be asked to do. I am willing to be in the study.

Learner's name (print): Learner's signature: Date:

Witness's name (print) Witness's signature Date:

(The witness is over 18 years old and present when signed.)

Parent/guardian's name (print) Parent/guardian's signature: Date:

Researcher's name (print) Researcher's signature: Date:

Appendix D: Online Questionnaire

Demographic Information

Information provided will be kept confidential and used purely for the purpose of the research.

1. Research code: _____
2. Gender (Please tick the appropriate box)

| | |
|--------|--|
| Male | |
| Female | |

3. Age of student (Please tick appropriate box)

| | |
|-------|--|
| 12-13 | |
| 14-15 | |
| 16-17 | |

4. Grade (Please tick the appropriate box)

| | |
|----|--|
| 10 | |
| 11 | |
| 12 | |

6. Place of Participation (Please tick the appropriate box)

| | |
|--------------|--|
| Urban | |
| Rural | |
| Other | |

Section B: Students’ experiences of mobile learning at Islamic high schools in the Nelson Mandela Bay District in South Africa

1. How frequently do you use mobile devices (smartphones or tablets) for educational purposes?
2. What type of activities do you do on your mobile devices for learning?
3. How has mobile learning influenced your learning experience in comparison to traditional classroom learning?
4. Which mobile devices do you use most for your learning?
5. Do you find mobile learning cost effective?
6. What would you do to improve the mobile learning in Islamic schools?
7. What challenges, if any, have students at Islamic schools of NMBD encountered while using mobile devices for learning, and how did you overcome them?
8. What guidelines did the teachers at Islamic schools of NMBD follow to ensure adequate and fair implementation of mobile learning in these schools?
9. What strategies do you think can be used in Islamic schools for better implementation mobile learning?
10. What are the benefits of mobile learning in Islamic schools?
11. Will you be available to have a follow-up interview? If yes, please provide your contact details.

Cell: _____ Email: _____

| |
|---|
| <p>Any additional comments on mobile learning experiences in Islamic schools.</p> |
|---|

Interview Title: Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District.

Hello, Participant A, I am Yasin Gul, a student pursuing the MEd in Open and Distance Learning program at the University of South Africa, under the esteemed supervision of Prof Geesje Van den Berg and Prof Patience Kelebogile Mudau within the Department of Curriculum Studies. Thank you for participating in this interview. The purpose of this conversation is to gain insights into your experiences with mobile learning. Your input is invaluable in helping us understand the impact of mobile technology on your learning outcomes. The interview will take approximately 45 minutes. Your responses will be kept confidential and will contribute to our research. Are you comfortable proceeding?"

1. How frequently do you use mobile devices (smartphones or tablets) for educational purposes?
2. What type of activities do you do on your mobile devices for learning?
3. How has mobile learning influenced your learning experience in comparison to traditional classroom learning?
4. Which mobile devices do you use most for your learning?
5. Do you find mobile learning cost effective?
6. What would you do to improve the mobile learning in Islamic schools?
7. What challenges, if any, have students at Islamic schools of NMBD encountered while using mobile devices for learning, and how did you overcome them?
8. What guidelines did the teachers at Islamic schools of NMBD follow to ensure adequate and fair implementation of mobile learning in these schools?
9. What strategies do you think can be used in Islamic schools for better implementation mobile learning?
10. What are the benefits of mobile learning in Islamic schools?

Thank you for participating in this interview. Your input is greatly appreciated and will contribute to our understanding of mobile learning experiences. Your responses will be treated confidentially and will only be used for research purposes. If you have any further questions or would like to provide more insights in the future, please don't hesitate to reach out. Thank you once again for your time.

Sincerely,

Researcher: Yasin Gül Contact details: 076 361 7551

Signature: _____

MEd in Open and Distance Learning

University of South Africa

Appendix F: Ethical Clearance Certificate



UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2023/09/06

Ref: **2023/09/06/55932916/20/AM**

Name: Mr Y Gul

Student No.:55932916

Dear Mr Y Gul

Decision: Ethics Approval from
2023/09/06 to 2026/09/06

Researcher(s): Name: Mr Y Gul
E-mail address: 55932916@mylife.unisa.ac.za
Telephone: 076 361 7551

Supervisor(s): Name: Prof Geesje van den Berg
E-mail address: vdberg@unisa.ac.za
Telephone: 012 429 4895

Name: Prof Patience Kelebogile Mudau
E-mail address: mudaupk@unisa.ac.za
Telephone: 012 429 8898

Title of research:

STUDENTS' EXPERIENCES OF MOBILE LEARNING AT ISLAMIC HIGH SCHOOLS IN THE NELSON MANDELA BAY DISTRICT IN SOUTH AFRICA

Qualification: MEd in Open Distance Learning

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2023/09/06 to 2026/09/06.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2023/09/06 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.



University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
8. No field work activities may continue after the expiry date **2026/09/06**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **2023/09/06/55932916/20/AM** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,



Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za



Prof Mpine Makoe
EXECUTIVE DEAN
qakisme@unisa.ac.za



University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

Appendix G: Permission Letter from School to Conduct the Research

To: Mr Yasin Gul
Master of Education in Open Distance Learning
University of South Africa

18 September 2023

RE: "Student's Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District"

This letter serves to confirm that the above project has received permission to be conducted on school/institution premises involving students of the school/institution as research participants. In undertaking this research, you agree to abide by ALL School/Institution regulations for conducting research on the premises and to respect participants rights to withdraw from participation at any time.

Appendix H: Participant`s Answered Questionnaire

Online Questionnaire

Demographic Information

Information provided below will be kept confidential and used purely for the purpose of the research.

1. Research code: _____
2. Gender (Please tick the appropriate box)

| | |
|--------|---|
| Male | |
| Female | ✓ |

3. Age of students (Please tick appropriate box)

| | |
|-------|---|
| 12-13 | |
| 14-15 | |
| 16-17 | ✓ |

4. Grade (Please tick the appropriate box)

| | |
|----|---|
| 10 | |
| 11 | ✓ |
| 12 | |

7. Place of Participation (Please tick the appropriate box)

| | |
|--------------|---|
| Urban | ✓ |
| Rural | |
| Other | |

Section B: Students' experiences of mobile learning at Islamic high schools in the Nelson Mandela Bay District.

1. How frequently do you use mobile devices (smartphones or tablets) for educational purposes?

Participant: I use them every day

2. What type of activities do you do on your mobile devices for learning?

Participant: I use my mobile device for a range of activities, including watching educational videos, participating in online discussions, and accessing digital resources.

3. How has mobile learning influenced your learning experience in comparison to traditional classroom learning?

Participant: For me, traditional classroom learning is more effective. I thrive in a structured environment where I can interact with the instructor and my friends. Mobile learning sometimes feels isolated.

4. Which mobile devices do you use most for your learning?

Participant: I prefer using my Google Pixel smartphone. The Android platform is user friendly, and I find it easy to access my course materials and educational apps.

5. Do you find mobile learning cost effective?

Participant: Yes, I do. Initially, I was concerned about the cost of acquiring a suitable mobile device. However, in the long run, it has proven to be a cost-effective choice. I can access a wide range of educational materials without additional expenses.

6. What would you do to improve the mobile learning in Islamic schools?

Participant: *Having a seamless offline mode would be a significant improvement. This would allow us to access course materials even in areas with limited or no internet connectivity, which is especially crucial for remote students.*

7. What challenges, if any, have students at Islamic schools of NMBD encountered while using mobile devices for learning, and how did you overcome them?

Participant: *Connectivity issues on my mobile device occasionally hindered my ability to access course materials in real-time. I also faced concerns regarding storage constraints due to limited space for downloading and storing large educational resources.*

8. What guidelines did the teachers at Islamic schools of NMBD follow to ensure adequate and fair implementation of mobile learning in these schools?

Providing clear instructions on how to navigate the mobile learning platform and access resources was a key guideline. This reduced confusion and enabled students to focus on the content rather than technical hurdles.

9. What strategies do you think can be used in Islamic schools for better implementation mobile learning?

Giving us options for offline access to course materials would be a good strategy. This ensures that students without consistent internet connectivity could still engage with the content on their devices.

10. What are the benefits of mobile learning in Islamic schools?

Participant: *Mobile learning has allowed us to access Islamic resources and texts at any time. This means we can engage with religious studies more consistently and on a more personal level.*

11. Will you be available to have a follow-up interview? If yes, please provide your contact details.

Cell: _____0000000000_____ Email: _____

Any additional comments on mobile learning experiences in Islamic schools.

Participant 7

1. How frequently do you use mobile devices (smartphones or tablets) for educational purposes?

Participant: *I use my phone every day.*

2. What type of activities do you do on your mobile devices for learning?

Participant: *My mobile device is my communication hub. I use it for group discussions, messaging classmates, and collaborating on group projects. I am also on WhatsApp groups, So I am quite active there as well.*

3. How has mobile learning influenced your learning experience in comparison to traditional classroom learning?

Participant: *I feel like they both have their pros and cons. Mobile learning is fantastic for self-paced study, but it lacks the interactive element of a classroom, it has always been good to be around our friends, but it is also good to be at home and do things in our own pace. In a traditional setting, I benefit from face-to-face interactions. Every time I have a question, I can ask the teacher or even friends immediately.*

4. Which mobile devices do you use most for your learning?

Participant: *As I mentioned in the questionnaire, I use a OnePlus smartphone for quick reference and communication with my classmates. Besides OnePlus, I have a Lenovo Yoga Tab that's perfect for reading and annotating articles.*

5. Do you find mobile learning cost effective?

Participant: *Yes, actually do because Mobile learning has really been a cost-effective solution for me. I no longer have to allocate a substantial portion of my budget to purchasing physical textbooks. Digital resources are often more affordable and readily available in play stores which is really cool and easily accessible. It saves me time also; I don't have to spend so much time to find specific information. It literally takes me minutes to access information on my smartphone or Tab.*

6. What would you do to improve the mobile learning in Islamic schools?

Participant: *I would basically do more about the improvements of the devices since they are the means of mobile learning, such as regular updates and improvements to the user interface and overall user experience would go a long way in keeping the platform engaging and user friendly. I find it very important that applications or tools must be user friendly because not everyone is an expert in the field.*

7. What challenges, if any, have students at Islamic schools of NMBD encountered while using mobile devices for learning, and how did you overcome them?

Participant: *Distractions can get a bit out of control because while you want to search for something or look through something at the same time you can see multiple things from other tabs or channels. Especially notifications and social media, occasionally hindered my focus on educational tasks. I also faced compatibility issues with certain educational apps. I think that was mainly software compatibility as I was getting asked to update my system software on my device.*

8. What guidelines did the teachers at Islamic schools of NMBD follow to ensure adequate and fair implementation of mobile learning in these schools?

Participant: *To be honest I don't really know much about the guidelines therefore I have no idea about this.*

9. What strategies do you think can be used in Islamic schools for better implementation mobile learning?

Participant: *I think I have mentioned this in the questionnaires as well. multiple formats can be for content, such as text, audio, and video, catered to different learning preferences. Maybe amongst these videos and other visual activities can be considered very important. This strategy acknowledges that students have diverse ways of processing information. I think it also acknowledges that everyone's best way of understanding things is different.*

10. What are the benefits of mobile learning in Islamic schools?

Participant: *Through mobile learning, we have the opportunity to participate in virtual study circles and discussions with classmates. This communal aspect enhances our learning experience and allows us to grow together in our faith. I personally think it is a very important benefit for me.*

Appendix J: Editing Certificate

Ricky Woods Academic Editing Services

Editing Certificate

Ricky Woods Academic Editing Services

Cell: +27 (0)83 3126310

Email: rickywoods604@gmail.com

To Whom It May Concern

College of Education

University of South Africa

Editing of a Master's Dissertation

I, Marietjie Alfreda Woods, hereby certify that I have completed the editing and correction of the master's dissertation: **Students' Experiences of Mobile Learning at Islamic High Schools in the Nelson Mandela Bay District in South Africa** by **Yasin Gül**, submitted in fulfilment of the requirements for the degree **Master of Education in Open Distance Learning**. I believe that the dissertation meets with the grammatical and linguistic requirements for a document of this nature.

Name of Editor: Marietjie Alfreda Woods

Qualifications: BA (Hons) (Wits); Copy-editing and Proofreading (UCT); Editing Principles and Practice (UP); Accredited Text Editor (English) (PEG)

MA (Ricky) Woods



4 February 2024