Title: Digital Transformation within the South African banking industry and how it influences customer engagement.

Student Name: Noluthando E. Dlova.

[redacted]

Supervisor: Dr. Helena van Wyk

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ABSTRACT

Globally organisations have experienced market pressures that require them to adapt to change and adopt digital transformation initiatives. This research study explored how digital transformation within the South African banking industry influenced consumer engagement, asking questions relating to how the adoption of new technologies would aid in maintaining the integrity of the human interaction part of the service offering. The objective was to understand how South African banking customers experienced the advent of digital transformation as it related to how customers interacted both digitally and traditionally with banks. If the introduction of new ways of banking (Artificial Intelligence, cloud computing, automation, chat bots, application programming interfaces, digital identity, and biometrics) took into consideration the human element of customers engaging with banking brands. A qualitative study approach was deemed appropriate for the study which included banking customers who had a good understanding of digital transformation and the different technologies set in place for their banking convenience. The use of the Diffusion of Innovation Theory as well as the The Technology Acceptance Model showed that new ideas are great however, there must be a marriage of human centricity and technology when adopting digital transformation for banking services.

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1. Chapter 1: Introduction

Organisations globally have faced market pressures forcing them to undertake digital transformation as part of enterprise growth projects and/or initiatives (Van Dyk & Van Belle, 2019). Louw & Nieuwenhuizen (2019) state that continued technological growth coupled with the ever-increasing adoption of the internet have resulted in the rise of opportunities for further business digitalisation and new digital business model formulation. The banking sector is not exempt from the need to evolve by incorporating digitisation strategies for better service delivery and customer engagement. Within this context the focus will be on the South African banking industry to provide a deeper understanding on the emphasis and drive for digital transformation to create more convenient banking solutions, offer superior customer service and engagement opportunities for South African banking customers.

From an organisational standpoint the adoption of digital strategies is one that yields tangible returns, noticeable business ROI, savings and data required to continue to thrive and develop a competitive edge (Moden & Neufeld, 2020). However, the risk of losing the value of human interaction through service delivery is also real (Louw & Nieuwenhuizen, 2019). Although digital adoption in the sector does have favourable outcomes, customer engagement has been affected and consumer behaviours have been impacted by the availability of infrastructure (or lack thereof) (Businesstech, 2021).

The challenge brands face is continuing to provide that human element to customer service while successfully creating safe, seamless, convenient, accessible digital banking (Valenti & Alderman, 2021). Therefore, South African banking brands' failure to ensure that digitization can effectively cater for the lack of human interaction can result in negative impact on consumer attitudes, their behavior towards the brands and misalignment of the brand positioning as well as the identity banks are portraying. The below will delve deeper into the research paradigm as it relates to the research and outlines the reason behind the choice of paradigm.

1.1. Background and orientation

The escalated growth of technology and technological developments is aimed at streamlining business processes as well as service delivery. Organisations globally are faced with market pressures forcing them to undertake digital transformation as part of enterprise growth projects and/or initiatives (Van Dyk & Van Belle, 2019). This has led to this study focusing on the banking sector and exploring how digital transformation within the South African banking industry influences consumer engagement.

1.2. Rationale

Globally digital transformation is no longer optional but necessary. According to Userlane (2022) states that digital adoption has become a basic requirement of transformation and change processes within an organisation. Industries like the banking sector began their digital transformation years before the advent of the Covid-19 pandemic, however, in South Africa Covid-19 accelerated the development of the industry's digital and online banking services (Moden & Neufeld, 2020). Although digital transformation in the sector does have its favourable outcomes, customer engagement has been affected and positive consumer engagement has been impacted by the availability of infrastructure (or lack thereof) (Businesstech, 2021).

1.3. Problem statement

Advancement of technology globally has led to brands being pressured to adapt their banking strategies to stay abreast with the ever-changing digital environment (Mtembu, 2021). Within the context of this research study, the banking industry is gradually adopting digital banking technologies to create more convenience banking solutions for South African customers. The challenge brands face is continuing to provide that human element to customer service while successfully creating safe, seamless, convenient, accessible digital banking (Valenti & Alderman, 2021). Failing to do so can result in a negative impact on customer engagement and misalignment with the brand as it relates to the potential loss of the human element (Valenti & Alderman, 2021).

1.3.1. Why is the problem worth investigating?

Digital transformation has become a part of all industry diversification however within the banking industry the conversion of customers to being 'fully' digital is still a far reach (Businesstech, 2021). During Covid-19 South African banking customers had no choice but to adapt to digital banking as much as possible and with the known lack of appropriate infrastructure as stated in Businesstech (2021), this study became relevant to understand how banking customers engagement with banks influenced how they engaged with their specific banking brands. The findings would share what customers think and what they would like banking brands to consider with continued digital adoption and transformation.

1.3.2. Research questions

1.3.2.1. How has South African banks' digital transformation influenced customer engagement?

1.3.2.2. How do South African customers experience digital engagement with local banking brands against the Technology Acceptance Model?

1.3.2.3. How has digital transformation influenced how banks engage with customers?

1.3.3. Research objectives – Present

1.3.3.1. Evaluate how digital transformation has influenced how customers engage with banks.

1.3.3.2. Evaluate the digital customer engagement experience of banking customers.

1.3.3.3. Analyse how digital transformation played a role in South African banks and how they engage with their customers.

1.4. Purpose statement

The aim of the study is to explore digital transformation within the South African banking industry and how it influences customer engagement. This included the potential misalignment between brands and their customers presented by the challenge of possibly losing the human element of engaging with banking customers.

1.5. Conceptualization (of key concepts)

The key concepts which are customer engagement and artificial intelligence (AI) are detailed further below in chapter 2 as part of the literature review coupled with the relevant theories that relate to the study.

- **Customer engagement** takes place through digital communication channels as well as face to face (Qualtrics, 2022). Customer engagement was developed during the growth of the digital era, and this was due to brand and customer engagement becoming more prevalent and visible as means of a two-way communication developed over online channels.
- **Artificial Intelligence** (AI) is human innovation where digital computers or computer-controlled robots are created as smart machines with the ability to perform tasks which would typically be performed by humans (Schroer, 2022).
- **The Diffusion of Innovation Theory** which notes the patterns and speed at which new ideas, practices and, or products spread through the population (Du Plessis & Satar, 2020).
- **The Technology Acceptance Model** (TAM) which is an information systems theory that delves into how users come to accept and use technology in their everyday life (Du Plessis & Satar, 2020).

1.6. Overview of Research Methodology

The paradigm used for the purpose of the study was interpretivism. It aimed to understand and describe meaning social interactions as well as experiences more so since the study focused on customer engagement. With the paradigm confirmed the methodological position as it related to interpretivism meant that the chosen approach for the research would be to conduct a qualitative study (Du Plooy-Cilliers, 2014).

The research method used was field research. According to Bezuidenhout and Strydom (2021) field research has been a data collection method used throughout history dating back as far as the 19th Century. Research population included South African banking customers with an understanding of digital transformation. Sampling was a non-probable with the method focused on purposive sample. A pre-test was conducted with a sample of the population to ensure that participants understood the study. Qualitative data was collected by means of an online focus group with a structured questionnaire based on the research questions as well as objectives used to construct the questions. Data was then analysed using the Miles & Huberman thematic analysis examining the perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights. A detailed discussion on methodology is included in Chapter 3.

1.7. Structure of the paper

The research study is outlined in the form of chapters leading from the contextualization of the research study, the focus of the study, the consolidation of the analysis and findings. Chapter one focuses on setting the context behind why the chosen topic along with the problem and purpose statements. Chapter two gives insights into the literature review which consists of the secondary data collected to form the theoretical foundation along with the outline of the research concepts and theories. Chapter three Segway's into the research design and methodology informing of the paradigm chosen for the study. Chapter four will be the discussion of the findings based on the data collection and analysis, while chapter five completes the structure with the conclusions looking into the ethics, limitations, delimitations, and final research summary conclusion.

Moving into chapter two is the literature review. The literature review aimed to provide a foundation of knowledge on the topic of the study, to outline the concepts and theories chosen for the study as well as place my own research within the context of existing literature making a case for why further study is needed.

2. Chapter 2: Literature Review

Continued technological growth coupled with the ever-increasing adoption of the internet have resulted in the rise of opportunities for further business digitalisation and new digital business model formulation (Louw & Nieuwenhuizen, 2019). The global banking sector is not exempt from the need to evolve by incorporating digitisation strategies for better service delivery and customer engagement. Within this context the focus will be on the South African banking industry to provide a deeper understanding on the emphasis and drive for digital transformation to create more convenient banking solutions and offer superior customer service and engagement opportunities for South African banking customers. Prior to the 4th Industrial Revolution (4IR), services rendered by banks were mostly manual and required human interaction, i.e., a customer had to physically walk into a banking branch to open a banking account, liaise with a consultant or withdraw funds. This system, albeit functional, was not without its discrepancies. The introduction of digital transformation has since redesigned the landscape.

Banking services include Digital Banking which makes use of digital channels like digital banking applications (Apps), USSD (Unstructured Supplementary Service Data), online self-help portals, internet banking, payment of bills online, integration with FinTech's, online telecommunications, and including cellphone banking (Louw & Nieuwenhuizen, 2019; Mothibi and Rahulani, 2021). The disruption of life as the world knew it due to COVID-19 fast tracked the use of digital banking (Moden & Neufeld, 2020). During the months of hard lock down where human interaction was at a minimum in South Africa, customers could only interact with banks virtually.

This led to banks further redefining their service offering to put first the needs of customers, update their cyber security features to make customers feel safer when using digital banking; collaborating with FinTech's and third-party services to streamline offerings; developing digital strategies which offer hyper personalisation and ensuring that contactless banking was accessible to customers (Mtembu, 2021). From an organisational standpoint the adoption of digital strategies is one that yields tangible returns, noticeable business ROI, savings and data required to continue to thrive and develop a competitive edge (Moden & Neufeld, 2020). However, the risk of losing the value of human interaction through service delivery is also real (Louw & Nieuwenhuizen, 2019). Although digital adoption in the sector has had favourable outcomes, customer engagement has been affected and consumer behaviours have been impacted by the availability of infrastructure (or lack thereof) (Businesstech, 2021).

The challenge brands have faced included continuing to provide that human element to customer service while successfully creating safe, seamless, convenient, accessible digital banking (Valenti & Alderman, 2021). Therefore, South African banking brands' failure to ensure that digitisation can effectively cater for the lack of human interaction has resulted in a negative impact on consumer attitudes, their behavior towards the brands and misalignment of the brand positioning as well as the identity banks have been portraying. The key concepts which are customer engagement and artificial intelligence (AI) are detailed further below coupled with the relevant theories that relate to the study.

2.2. Customer Engagement

Qualtrics (2022) argued that customer engagement was developed during the growth of the digital era, and this was due to brand and customer engagement becoming more prevalent and visible as means of a two-way communication developed over online channels. Murray ([s.a.].) agreed more so over the evolution of the concept over recent years as a way for brands to build relationships with customers and maintain brand loyalty. Murray ([s.a.].) defined it as the ongoing cultivation of a relationship between a brand and its consumers which transcends far beyond the monetary transaction. Customer engagement takes place through digital communication channels as well as face to face (Qualtrics, 2022). Furthermore Qulatrics (2022) stated that it is a series of incremental interactions that influence a whole overtime. The interactions can be positive or negative based on the customer’s experience of the brand and thus may result in the feedback from the customer being favourable or unfavorable (VMO, 2022). Not to be mistaken for customer experience, customer engagement afforded brands opportunities to anticipate customer needs using engagement metrics, building brand loyalty by living up to the brand promise and providing memorable customer services, personalising the service to show customers they matter and essentially all of that has led to business growth (Qualtrics, 2022; VMO, 2022). The definition adopted for this study is that of Qualtrics (2022) as it was relevant for the study. As mentioned above it focuses on the incremental interactions that build overtime which may be negative or positive. With the study focusing on the influence of digital transformation on customer engagement, the definition gave room for the opportunity to unpack customers' experience of digital engagement with banking brands and if the possible loss of the human element also influenced this engagement.

2.3. Artificial Intelligence

The 4th Industrial Revolution (4IR) has played a pivotal role in how technology has advanced over the years. 4IR and innovation are interwoven in that both require creativity, adaptation to new technologies for better efficiency and communication (Schwab, 2016). Innovation has been defined as challenging conventional norms set by previous processes or approaches transported from one industry into another and /or from one geographical area to another (Jong, Marston & Roth, 2015).

Digital transformation has been a result of the innovation brought about by 4IR. This has led to the birth and rise of Artificial Intelligence (AI). AI is human innovation where digital computers or computer-controlled robots are created as smart machines with the ability to perform tasks which would typically be performed by humans (Schroer, 2022). The invention of AI has afforded organisations globally the opportunity to digitise their businesses and customer service offerings (Louw & Nieuwenhuizen, 2019). Schroer (2022) also stated however that the existing definition left room for misunderstanding when looking at the basic meaning of words such as machine or the term computer controlled, the article shared how what makes a machine intelligent is a result of integrative science incorporating multiple approaches. This created the advancement of machine learning which continues to create a paradigm shift across all industries. Thus, the move to digital banking. According to Mothibi and Rahulani (2021) Digital Banking has been referred to as the digitisation of existing traditional systems as a means of delivering services to banking customers. To optimise digital banking banks have made use of digital technologies to power the effectiveness and efficiency of digital banking. Digital Technologies have given way to various options used by South African banks which are: Artificial Intelligence (AI), automation, robotics process automation, cloud computing, application programming interfaces (APIs), chatbots also known as robo advisory, digital identity and biometrics i.e using one’s face or fingertip to access a banking app on the phone (Phaneuf, 2022). Theories linking to digital transformation are the Diffusion of Innovation Theory which noted the patterns and speed at which new ideas, practices and, or products spread through the population (Du Plessis & Satar, 2020). The Technology Acceptance Model (TAM) is an information systems theory that delves into how users come to accept and use technology in their everyday life (Du Plessis & Satar, 2020). Although considered a positive progression, technological innovation has its negative parts. Customers' personal information could easily be accessed by unlawful cyber security breaches. Brands remain responsible for ensuring the safety of customer information and have been required to adhere to consumer privacy regulations set out by the government's Protection of Personal Information Act (POPIA) (POPIA, 2022). Banks continuously develop cyber security improvements to keep consumers information private. Data breaches affect customer engagement from a trust perspective because of the fear of the misuse of their information. The adopted definition for AI is that of Schroer (2022) This definition was relevant for the study seeing as digital transformation brought about by AI has seen banking services transition from being offered through human interaction to being offered through digital banking using AI such as chat bots in certain instances. This gave room for the argument that AI has eliminated human interaction in some services and although programmed to deliver seamless services, humans thrive on human interaction and with that being replaced it has the potential of influencing customer engagement.

3. Chapter 3: Research Methodology

The methodology focused on the data collection and data analysis methods which will were undertaken as part of the research study. The research design is a qualitative design, and this section will investigate the data collection and analysis as it relates to that method along with the detail of the chosen paradigm, the population and narrowed down to the accessible sample and in conclusion the anticipated contribution, ethical considerations as well as limitations of the study.

The below will delve deeper into the research paradigm as it relates to the research and outlines the reason behind the choice of paradigm.

3.1. Research paradigm

The paradigm chosen for the purpose of this study was interpretivism. This paradigm aimed to understand and describe meaningful social interactions and experiences, for this study it related to banking customers and their experience with banking technologies and how this influenced how they interacted with South African banking brands (Du Plooy-Cilliers, 2014). Since the study focused on customer engagement and the influence of that experience as it relates to digital transformation in the banking industry, customer engagement became the lens through which interaction with brands was perceived and therefore related to the ontological position which stated that reality is fluid and subjective based on each individual's perception. Interpretivism as it relates to the 5 positions of research assumes a subjective epistemology which provided an uninterrupted link between the research and research subject as this approach assumed that humans cannot be separated from their knowledge (Kivunja and Kuyini, 2017). According to Al Harahsheh & Pius (2020) it assumed a relativist ontology meaning that reality is perceived through intersubjectivity. Du Plooy-Cilliers (2014) argues that interpretivists have seen the social world as how humans perceive it to be in their own personal view. The terms used were fluid and fragile, as humans' perceptions change so does their reality. Methodological position used qualitative methods of study as there was no empirical data used in the in depth understanding of realities using words rather than numbers (Du Plooy-Cilliers, 2014). The metatheory position allowed the study to tell the story of the customers experience as a means to showcase the in depth understanding of the different realities and make use of inductive reasoning, meaning that the research will take a 3 prong approach starting with making observations and/or gathering data, then taking a broad view of the collected data and searched for recurring patterns and finally made general conclusions that were incorporated into the chosen theories (Bhandari, 2022).

The final lens being balanced axiology assumed that the outcome of the research has reflected the values of the researcher as s\he attempted to present a balanced report of the findings and value the uniqueness of the outcomes (Al Harahsheh & Pius, 2020).

With the paradigm now explored, the research design is introduced below and will include the type of research that was used and relevant for the study.

3.2. Research approach

The methodological position as it relates to the paradigm made use of the qualitative method since the focus was on perception and subjectivity. Therefore, the approach chosen for the study was the qualitative research approach. Qualitative research is the understanding of self and others through a systematic analysis of daily actions (Bezuidenhout & Strydom, 2021). It further stated that it allows researchers the opportunity to explore subjective experiences and their underlying qualities (Bezuidenhout & Strydom, 2021). This approach was more fitting for understating consumer engagement. Each customer is an individual in their own right and from the axiological position of interpretivism, the study aims to value each of their unique experiences.

3.3. Research design

For the purpose of this study the qualitative design perspective has focused on the phenomenology perspective more so the existential phenomenology to understand the participants perceptions and perspectives of the actual lived experience as it relates to the research (Bezuidenhout & Strydom, 2021). The intended data will be a selection of primary and secondary data.

3.4. Population and sampling

A research population may be defined as a collection of individuals or objects known to possess similar characteristics (Pascoe, 2021). Population parameters are defined by Pascoe (2021) as the number of people within the population as well as their shared characteristics or social artefacts. The nature of the population for this study was the brand interaction in the form of customer engagement, the size of the population being all South African banking customers and their unique characteristics was that they interacted with their respective banking brands digitally and/or traditionally in some way or another when making use of banking services. Seeing as realistically for the purpose of this study one was unable to target all South African banking customers, the population has been narrowed down to an accessible population to be included in the study.

The sample can be defined as the narrowed version of the accessible population or its subset which will be selected to become the participants of the research (Question Pro, 2022). Non-probability sampling was the basis for this study as it outlines the fact that the possibility of determining an entire population's results is impossible made realistic the choice to use a smaller sample of the population and it was not a product of a randomized selection process (Du Plooy-Cilliers et al, 2021). The method used to determine the characteristics was purposive sampling seeing as the group were required to consent to being part of the field research exercise because of the POPIA ACT. Purposive sampling created room for the creation of questioning which clearly determined which characteristics of the population were vital for the study (Du Plooy-Cilliers et al, 2021). The sample frame's aim was to include representation from the below characteristics:

- Digital and traditional banking customers
- Customers who make use of cellphone, internet, and digital banking services
- Customers who make engage with banks frequently both online and face to face
- Customers who have a basic understanding of digital transformation and AI

The qualifying criteria required for inclusion was related to the above-mentioned context.

Moving into section two is the data collection. It mentions that a pretest was conducted as well as the reasoning for it. It also outlines the data collection method, how it was conducted and the outcomes.

3.5. Data collection

For this study field research was conducted in the form of a focus group selected within the parameters of the population and sampling mentioned previously. According to Bezuidenhout and Strydom (2021) field research has been a data collection method used throughout history dating back as far as the 19th Century. The anthropologists of the time who moved from exploring documentation to participant observation which is the technique we deem as field research. Field research is ideal for this study as it is a qualitative research data collection method concerned with understanding and interpreting human social interaction within a group setting whether within their communities, and/or society by observing and interacting with these people in their natural surroundings as described by Research Connections ([s.a.].).

3.5.1. Application of data collection method

3.5.2. Pre-test: Focus Group

The pretest was conducted to ascertain if the chosen sample understood the topic of the study without purely assuming that as banking customers, they would know about concepts such as digital transformation and AI. Research pretesting is regarded as an essential and effective technique for ensuring validity and credibility of the data collected to reach the desired finding(s) (Hurst S, Arulogun O.S, *et al* 2015). Furthermore, Hurst et al (2015) continue to add that rather than being a linear process it is more iterative as it allows for self-correction and ensures opportunities for reliability. By definition pretesting allows for the actual formulation of the formal process but on a smaller scale to test if the sample would understand the questions, would allow for reiterations that are more suited for ensuring that the data being mined will be relevant. The pretest process would also allow for changes that would make the questions more culturally inclusive in instances where titles would be offensive, perhaps Hurst et al (2015). To ensure further credibility of this study a pretest interview schedule was drafted, and a pretest focus group discussion was conducted to ensure validity of the participants answers.

Ethical clearance was received giving permission for the research to be conducted. The pretest was conducted using a voluntary sample which fit the characteristics of the population stipulated above and consisted of two individuals aged 34 and 56 within the Gauteng region. The pretest questions were based on the study’s research questions which are stipulated in the table below. These questions were created to mine for findings, to gain a better understanding of how customers engage with banks using traditional and digital banking, where they are on the diffusion of innovation theory bell curve as it relates to adapting to technology and the technology acceptance model.

Based on the pretest interview the questions were amended and other questions removed. Both the pretest and final questions are provided as Annexures. The questions were changed to focus on ensuring that the feedback required would provide richer insights, to take away repetition and obtain clearer responses. The pretest was transcribed and not analysed.

3.5.3. Focus Group Discussion

The Method of data collection was field research in the form of a focus group. A focus group interview is used by researchers to determine the participants' likes, dislikes, preferences, behaviours, and attitudes (Bezuidenhout & Strydom, 2021). This consisted of a small group of 6 people within the Gauteng region ranging from the ages of 30 - 36 years old who are frequent users of banking services within the region for both traditional and digital banking services. The group consented to take part in a focus group discussion and signed the consent forms. The goal was to determine their experience regarding engaging with banks traditionally as well as digitally and how this influences that engagement. The group fit the context stated in the population sampling.

The focus group discussion took place virtually through Google meet due to logistical restrictions of some of the participants. The discussion gave very clear links to the literature review in that some of the likes and pain points of the participants are what the theory had already stated which will be further details in the data analysis portion. Having the opportunity to gain perspective into customers who engage with banks within the country for business or personal use, showed the noticeable differences of what individuals deem as positives and negatives where digital transformation in the banking sector is concerned but also insight into the merging of human interaction and digital for better cohesion in the perceived convenience offered by inclusion of AI to banking services. Unfortunately, the scheduled in-depth Interview was not able to be conducted at this time due to unforeseen circumstances which led to its exclusion from the study. Therefore, the data collection and analysis were focused on the focus group which.

The next section investigated the data analysis where the explanation of how Braun and Clarke's 6 steps of data analysis were incorporated when analysing the data.

3.6. Data analysis

Qualitative data analysis includes the reduction, organisation, interpretation and substantiation of data (Miles & Huberman, 1994). Therefore, for the purpose of this study a thematic analysis is a useful method for examining the perspectives of different research participants, highlighting similarities and differences, and generating unanticipated insights (Miles & Huberman, 1994). The thematic analysis theory in use was that of Miles and Huberman as it created room for identifying, analysing, organising, describing, and reporting themes found within the data set. The data collected from the focus group was recorded and transcribed to analyse the feedback to reach the data saturation point for both data collection methods. The data shown below includes the themes derived from the focus group discussion and categorized in accordance with those specific themes that were identified based on the feedback from the participants. There are different approaches to consider when conducting a Thematic Analysis (TA), Bezuidenhout & Cronje (2021) speak of the inductive and deductive approaches where the inductive approach allows the researcher to rely on the research to determine themes based on the data and the deductive approach is the opposite as the researcher approaches the data with preconceived themes that are based on existing literature, theory, or knowledge. For this study the deductive approach was used seeing as the theoretical framework already has existing knowledge where the themes derived from the data will be linked. There steps followed in analysing the data are the six-steps of TA as outlined by Braun and Clarke which include the process of familiarisation, coding, generating themes, reviewing themes, defining, and naming themes, and writing up (Amjad, 2014). The 6 steps are further defined below in relation to the study:

3.6.1. Familiarising yourself with data

With the word being quite self-explanatory, the stage of familiarisation is about getting to know the raw data being analysed (Bezuidenhout & Cronje, 2021). The data had to be organised, transcribed, or converted depending on the collection method and written to start the analysis process. This allowed for the distinguishing of data from relevant and irrelevant feedback based on the goal of the questions asked (Bezuidenhout & Cronje, 2021). For this particular study the data was transcribed to gain familiarity, to find commonalities and emerging insights while making it easy to flow into step 2.

3.6.2 Generating initial codes

Step 2 is that of coding. The data was coded to derive themes from the participant feedback similarities or differences. Essentially it is the process of highlighting sections of the transcribed text, either words, phrases, or full sentences to create labels or "codes" to describe the content of the feedback (Bezuidenhout & Cronje, 2021). An example from the feedback:

Participant 1	**Codes**
"Where I don't even have to speak to a consultant or you know coz what I, my experience is that I'll speak to consultant 1 in Thando and consultant 1 in Thando says you can get this service online and then I call tomorrow and speak to Nqobile and then Nqobile is like no sure please go ahead with your reversal, right? So, I feel like with a human interaction, there is mostly a lot of inconsistencies"	Inconsistency in service Uncertainty of their offering.

Table 1: Feedback Text Coding

From the feedback from participant 1 the codes in the table emerged and each is an expression of the dislikes experienced by the participant when engaging with banks in the traditional sense. The codes also describe the idea or feeling expressed in that part of the text that relates to the particular participant's experience.

3.6.3 Searching for Themes

Step 3 is the art of searching for themes. The codes gathered from the feedback text had underlying themes which were further scrutinised, categorised, and compared with the data to reach that data saturation point where the final themes have been carefully selected (Akinyode and Khan, 2018). It's about identifying patterns and combining codes to form singular themes. What emerged was that some codes may be used as themes due to their similarities (Akinyode & Khan, 2018). Inconsistency was one of the codes that became a theme due to how it clearly summarised the participant feedback's experience that is linked to it.

Codes	**Themes**
Inconsistency in service	Inconsistency
Not following the script	
False advertising Technology is invasive	Lack of trust
Easy to access Always available	Easy Accessibility

Table 3: Feedback Coding and Themes

3.6.4 Reviewing Themes

During the reviewing process the act of identifying which themes were useful and an accurate representation of the data collected (Akinyode & Khan, 2018). The themes were then compared to the existing data set to discover if there had been omissions, if the themes were a true representation of the data and what amendments needed to be made to ensure the themes were accurate. In an event where issues relating to the themes may have been encountered this would warrant a separation and/or combination of themes or even discard unnecessary inclusions (Akinyode & Khan, 2018).

3.6.5 Defining and naming themes

The defining of the themes involved the exact formulation of what was meant by each theme as well as how it aided in the understanding of the theme. Theme names were better illustrated as succinct making them easier to be identified with (Akinyode & Khan, 2018).

3.6.6 Writing up

The final stage, the write up is the consolidation of the data analysis consisting of the introduction and the subheadings relating to methodology, research evidence and findings.

3.7. Limitations and delimitations

Limitations experienced while conducting the research related to the focus group and the in depth interview which unfortunately did not take place. Due to the participants schedules not alingining the focus group had to be conducted via a Google meet virtual call where some of the participants experienced connectivity issued leading to poor sound quality and unclear responses in certain intsances. This hindered the ability to have clear sound at certain points of the recording and when making notes for transcription. An indepth-interview with an industry professional did not take place as a result of non-commitment of time from the professional brought about by theirschedule as well. The attempt to secure an alternative was met with disappointment due to the individual securing a new role at a different organisation and the timing not being ideal as they were handing over and planning or the role change. Not having the industry insight from a professional with notable experience is a limitation that resulted in a one sided view of the research findings.

Delimitations of the study are the option to not interview an industry professional due to research time contartints as well as the limitations stated previously. Literature relating to study published after the data analysis and findings were finalised was not reviewed to minimize having to drastically amend the structure of the literature review which would affect the findings. The exlcution of the more senior banking customers as there wasn't access to a diverse enough group.

Next is chapter 4 with the consolidation of the findings and their discussion. This includes the feedback from the field research feedback. The chapter also showcases the fial remarks along with the choice of reliability, validity or trustworthiness of the study.

4. Chapter 4: Findings and Discussion

This chapter details the findings from the data collection described in Chapter 3. Data was analysed using qualitative data analysis, and the findings are discussed below.

4.1. Findings

This study is amongst various other studies who aim to understand how the influence of digital transformation in banking influences customer engagement taking into consideration that human customers still require the human element in any service offering. Although they enjoy the convenience provided by services and tools brought about by digital transformation and AI. The findings indicate that the general consensus amongst the participants was that they consider themselves to range from innovators to early adopters on the Diffusion of Innovation Theory (DOI) bell curve and are pro technological advancement in any industry, but more so in banking for the convenience which it provides. The findings also support Louw & Nieuwenhuizen (2019) noting in the literature review that the risk of losing the value of human interaction through service delivery is real. The theme which relates to service integration is in agreement with Valenti & Alderman (2021) quoted as well in the literature as stating that the challenge brands face is continuing to provide that human element to customer service while successfully creating safe, seamless, convenient, accessible digital banking. Participants felt that this is not always the case when interacting with their respective backing brands. In keeping with the links to previous knowledge stated in the study, because interactions are subjective based on each individual's experience with their specific banking brands, the feedback swayed from positive to negative (VMO, 2022). The discussion did allow for new insights to be mined and what did not previously appear was that of education. Due to the participants having parents who are of the baby boomer years their ease of use where technology is concerned tends to be more on the laggard stage of the DOI curve.

Participants Feedback

Participants were quite engaged in the discussion and varied on the extent to which digital transformation has brought about positive or negative influence on their engagement with banks based on the services they would be requiring at the time. When asked about their likes and dislikes about banking in general, participants were quite vocal about both aspects and unanimously shared that the convenience brought about by digital transformation in the sector makes their banking experience easier. They all preferred digital banking to traditional only when the AI tools in place are responsive and actually provide the service that has been communicated as a possibility. When asked about their perspective on changes to banking due to digital transformation one participant mentioned that although the advent of COVID-19 may have strong armed other customers to be more reliant or consider digital banking, there is a cohort of customers who have been early adopters since the introduction cellphone banking before banking applications were created. Also the most surprising comment from another participant was that banks assume that customers are knowledgeable about how to engage with them using tools brought about by their need to digitise.

She mentioned that although being educated about technological advancements is the customer's duty, education seems to be for the elite referring to the middle class upwards. The interesting outcome of this comment is the general agreement on the call because the participants stated how their parents continue to struggle to understand what the basics of digital banking are and still prefer traditional banking services because for them the human understands their needs. One of the important themes for this group was the issue of trusting the experts, in this case the banks. Majority of the participants went as far as labelling technology as invasive with banking technology not being any different due to cell phones always picking up on conversations which automatically leads to banking apps showing service offerings relating to what they might have said during a conversation. A positive theme was that of accessible convenience as the group showed appreciation for the convenience digital transformation and Artificial Intelligence (AI) have provided with the creation of bankings apps and after hours assistance chat bots. Accessibility was quite popular with words and phrases related to the theme being mentioned numerous times. The participants liked being able to access their funds, credit facilities, and assistance at their fingertips without having to visit a branch. One participant did mention however that the banking app transfer from phones was a tedious process which led to the theme of service integration. Participants felt that at times traditional banking and digital banking aren't as intertwined as they would like them to be and this makes them less efficient. An all round consensus was that of security, the theme which emerged from the data was lack of digital security. All the participants stated that in their daily and/or weekly engagement with their bank the one specific reason is to ensure that no fraudulent activity has taken place in their account and make sure to check bank charges against their banking activity to find any discrepancies of missing funds. This theme links back to that of trusting the experts. The participants were asked if there was ever an possibility of having banks that had no human interaction at all with no other bank offering an alternative or the opposite where all banks only had traditional services reliant on human interaction and no digital services at all would they bank with either of these options and knowing that they know now the whole group said no to both options which was an interesting result given that before digital transformation all banks only offered traditional services with human interaction. The final section of the questions gave the participants the opportunity to assume the role of the Chief Technology Officer who could add, change or take away any banking service and the prevalent theme here was education.

Education relating to online banking safety, phishing scams, AI and its advantages and disadvantages as it relates to banking, third party integration for banking apps and how customers can benefit. Some felt that more education around banking in general however it may be segmented to the various more important topics and more so to ensure that those in the lower SEM's (Standard Economic Measure) can have access to that education so they too are able to put measures in place to protect themselves where banking crimes are concerned as well as how to better manage their funds so they are aware when fraudulent transactions have taken place. The continuation of banking rewards was a positive aspect more so for two participants who made mention of eBucks by FNB and Absa rewards. The preferred banking brands were FNB and Capitec overall, Absa bank for their rewards on the banking app in the form of challenges. The least favourite was Standard where one participant made use of their services however didn't see it as part of her top two.

Thyme and Discovery bank were mentioned as the fully digital banks but the participants were not too pleased with the service offering when they would’ve preferred to chat to a consultant and the option was not available. The table that showcases the themes, their frequency and the verbatim feedback from the participants has been added as an annexure.

Final remarks on findings

What emerged in contradiction to previous research is that digitisation optimises digital banking to be effective and efficient (Mothibi and Rahulani, 2021). Participants mentioned the fact that the call me back service available on the banking applications for instance doesn’t always result in customers being called back. Discovery bank and Standard Bank were mentioned as two of the brands whose service is not as effective or efficient as it should be. This misalignment also speaks to the service integration and trusting the experts themes where the data shows that customers don’t always trust that what is advertised as seamless integration is always true. Education is key to ensuring that the older generation is aware of the threats that are brough about by technology adoption so they are better equipt to understand fake or fradualent schemes as well as were to report them. Also education relating to how new updates as well as releases affect their daya to day banking. Customers are advocates for digital transformation but banks need to ascertain that human and technology are aligned, have one voice as it relates to processes and service offerings, also for the human element to be efficient when technology is experiencing disconnections and issues.

4.2. Validity and reliability / trustworthiness

- **Trustworthiness**: Trustworthiness in qualitative research is the researchers attempt to safeguard the quality of the research (Koonin, 2021). Unlike quantitative research where integrity can be measured, in the context of qualitative research trustworthiness consists of credibility, transferability, dependability and conformability to establish the goodness or quality of the criteria (Koonin, 2021). Although the titles are different thse should be seen as interrelated. Research pretesting is regarded as an essential and effective technique for ensuring validity and credibility of the data collected to reach the desired finding(s) (Hurst S, Arulogun O.S, et al 2015). The focus group pretest contrinbuted to the validity and credibility of the research as it allowed for the confirmation of that the earmarked sample had an underdtanding of the topic and that it wasn’t built on assumption.

Transferibility as defined by Graneheim & Lundman (2003) is the extent at which findings are/can be transferred from different groups or settings. For this study the reader has the opportunity to relate the finds to other studies of the same interest and derive their own intepretations.

5. Chapter 5: Conclusion

The banking industry actively pursues digitalisation across their business models and services to remain relevant in the market. The aim is to encourage customers to embrace digital transformation. With that said human remain true to their need for interaction and as such are looking for convenience that embraces digital transformation while keeping the inclusion of the human element.

5.1. Concluding answers to the research questions

How has South African banks' digital transformation influenced customer engagement?

Key finding was that digital transformation has influenced customers to be more receptive to digital banking and engagement is easier and convenience. It has also meant being more vigilant with the activities that take place where their bank accounts are concerned because of the rise in cyber crimes. Customers agreed that banks can do more to educate customers on how to protect themselves agaings cyber crime.

How do South African customers experience digital engagement with local banking brands against the Technology Acceptance Model?

Although the convenience is positive, everyday banking is hindered by lack of service availability due to lack of proper infrastructure or service. The need for a human to assist is still considered a necessity and that technology as well as human both adhere to similar process and procedures to ensure uniformity of service offering.

How has digital transformation influenced how banks engage with customers?

Banks first option is to refer customers to their digital service and use human interaction as the alternative in the instance that for example a chat bot was not helpful. For the more senior customers this feels like an exclusion as they are not as adaptive as their younger conterparts.

5.2. Implications of findings for future practices

Future implications of the study has the opportunity to make a contribution to the banking sector by sharing findings that may be of aid in better curating customer engagement initiatives and services that make customers feel that digital transformation has not eliminated the human element of customer engagement but rather attempting to enhance it by creating more convenience that will continue to be easily accessible.

5.3. Conclusions

The study set-out to establish the influence of digital transformation on customer engagement in the banking sector with the focus on if the constant technological advancements to banking services won't impede on the human element that is still regarded as a necessity when interacting with customers. The literature reiterated this with Valenti & Alderman (2021) stating the challenge of brands misalignment with the customer engagement in instances where there is a disconnect of digital banking services and the human service component.

Customer engagement was a concept created due to the increase in digital transformation in all industries and for the banking sector where customers interact with financial institutions on a daily basis, the importance of the banking brands keeping their service brand promise (Qualtrics, 2022). Findings stated that banking brands should continue to make customer engagement a key component as the digital transformation incline continues. To ensure that technology and human both sing from the same hymn book when assisting on certain matters. The banking industry actively pursued digitalisation across their business models and services to remain relevant in the market. The aim was to encourage customers to embrace digital transformation. The banking sector has been cognisant of all aspects of digital transformation. With any society there have always been early adopters and laggards. Technological advancements have been welcomed and celebrated however, in the instance where the advancements were disrupted the natural safety net for customers has been liaising with humans. Further research conducted will consinder delving into how South African banks can better understand the motivations of their customers as they have engage with them digitally. The consideration of communities who do not have access to infrastructure that makes interacting with technology easier. Understanding how the effects of security breaches has affected customers lives to the point that their livelihoods are impacted and how this can be better preempted. Further unpacking of the diffusion of innovation and technology acceptance model theories has provide greater understanding of how digital adoption and its pace are perceived by South African customers.

While the feedback has been varied in certain instances the general agreement was that of security and effective collaboration of digital as well as traditional services to ensure that customer engagement is easy and simple. Participants are looking forward for further technological advancements to create more convenient ways of engaging their banks, however, they do believe that it is the responsibility of the brands as well to educate to all customers at all levels, ensure that security is always being upgraded to keep up with the endless cyber security threats in the industry and be transparent. Customers concerns about their elderly being victim to cyber crime calls for more initiatives to educate these customers in means that are relatable.

5.4. Ethical considerations

An informed consent was shared with the participants insuring that they were aware of the reason(s) as well as objectives for research study and to ensure that they are formally informed of the research being conducted. Data collection will included the option for confidentiality to ensure that their identities are not disclosed if that is their choice. This ensured that participants felt safe and that their information was safe and used solely for the purpose of the research. Clear time schedule was drawn up to inform participants of the date(s) and time(s) of the focus group discussion to avoid time wasted due to unorganised planning. Intention to avoid deception was deliberate. As a researcher the aim was being sensitive to participats diversity, personal circumstances and conducting the focus group in a manner where everyone felt heard and equal. Confidentiality and anonymity was adhered to to keep their information safe and thus their details were not shared or used for any other matter but that of the research.

Availability of the research to participants was not optional however due to the findings being relevant only for this study and the questions structed purely to support this specific research. This was to ascertain that the recording would not be transcribed for other research work.

5.4.1. Ethical Limitations

Availability of participants for scheduled times given that they would be working different hours or have other commitments that are unavoidable. The data analysis and mining aspect of qualitative research is quite a labour intensive exercise due to the data being textual and having to analyse it based on themes that make it easier to interpret. The sample size may not be large enough to offer/showcase significant difference in feedback especially in cases where participants share the same perspective. The limitations of non-probability sampling can mean that the sample may or may not represent the entire population accurately thus not offering enough varying perspectives.

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Appendices:

A: Ethical Clearance Form

B: Informed Consent Form (qual data)

C: Questionnaire (quant) / Interview or Focus group Schedule (qual data)