AN INVESTIGATION OF CUSTOMERS' PERCEPTION OF AND EXPERIENCE WITH BANKING TECHNOLOGY

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(Abstract to Conclusion)

DECLERATION

I hereby declare that the Research Report submitted for the ***BCom Honours in Management*** *degree to The Independent Institute of Education, is my own work and has not previously been submitted to another University or Higher Education Institution for degree purposes.*

Signed: ______________________________

Date: 23/08/2020

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ABSTRACT

This study sets out to examine customers' perception of and experience with banking technology/digital banking. This study uses semi-structured interviews from random bank customers, as the researcher will have to probe various points of feedback from the participants. This study attempts to gain a better understanding of bank customers' experiences with banking technology, and what contributes to said experiences. It will also be used to determine their opinion of advancing technology. The gathered data was compiled and thematic analyses was used to analyse the participant data.

This was a qualitative study, approached from an exploratory perspective. The data revealed that there is a relationship between the factors that contribute to the experience of customers, related to digital banking. It also showed that in many cases, it not just a clear cut "Yes" or "No", as it depends on the context/situation. This hinted at possibly more variables affecting customers' perception and experience with digital banking. Customers' experience is therefore a big factor in the success of banking technology adoption. This study adds a small ounce of understanding towards this specific phenomenon. Convenience proved to be a big contributor to customers' experience with digital banking.

Keywords: Customer experience, Digital banking, Banking technology, Banking, Customer perception, Digitalisation

1. INTRODUCTION

1.1 Research Purpose

The purpose of this study is to explore the perception and experiences that people/customers of banks in the Pretoria East and Centurion areas have with banking technology.

1.2. Problem Statement

With the advancement of banking technology, even though there is increased opportunity/potential for improving customer experience it also introduces more complexity in regards to improving customer experience (Digital Banking Report, 2017). Štavljanin and Pantović (2017) argue that most bank customers, globally, are multichannel oriented (digital banking and traditional banking). It is therefore important for banks to understand why digitally oriented customers are rare, even though banking technology/digital banking continuous to advance. Understanding customers' perception and experience in this regard is essential. Mbama, Ezepue, Alboul and Beer (2018) postulates that a need exist, to understand the effect digital banking has on customers' experience even though they may be accepting towards it.

1.3 Rationale and Relevance

In a modern society, technology plays a significant role in a corporate and social environment. Technology is used for various reasons and is ever changing therefore it is vital for organisations to stay abreast with advances in technology. This is the reason why it is important for companies and in this case banks to understand and get insight into how their customers experience their interaction with the technologies that they as the banks decide to implement. E-commerce and e-business is continuously coming to the fore as a result of globalisation and has become an unavoidable component of business strategy, according to Rana (2013). For customers and banks, the implementation of E-banking has proven to be effective at enabling quick services and costs reduction, respectively (Rana, 2013). Rana (2013) argues that it is extremely important to analyse the actual state of customers' satisfaction in the banking industry. This paper will therefore explore the experience that banking customers have with banking technology and do so using bank customers in the Pretoria East and Centurion areas of Gauteng, South Africa.

Throughout this report, banking technology and digital banking will be used interchangeably.

It has to be noted that many if not all studies observed during this research paper refer to literature as old as the 1980's when technology started emerging in businesses and specifically banking. With that said, the concepts and arguments are still very much relevant in the various industries today as many of these topics are continuous. Even literature as recent as 2020 make use of quite a lot of old literature to support the specific studies/papers.

Technology is ever present in modern day society, as it is used almost everywhere. Technology in business comes in various different forms and is used in different ways with certain anticipated outcomes. When it comes to the banking industry, technology plays an enormous role and always has, in the functioning of these institutions as well as their service offerings (Gupta & Chanana, 2013), as well as playing an important role in steering strategic business decisions (Leuta & Pretorius, 2019). In other words, organisations (in this case banks) need to make decisions based on market and global factors which include customers and their expectations.

Gupta and Chanana (2013) states that technology has provided and continuously keeps providing the banking industry with new markets, new products, new services and efficient delivery channels. In most instances when looking at previous studies done on technology in the banking industry and business in general, the main discussion in regards to technology is information technology (IT). During this study various forms of technology will be mentioned but the main focus will be on digitalisation. This refers to the use of information technology (IT) by companies to become more customer-focused, more efficient, creating new revenue and/or improved streams as well as creating "new value-producing opportunities" so as to improve the overall state of the organisation (Sofigate, 2017). The reason that the main focus will be on IT is that, it seems to be the main element of the technological infrastructure or back-bone of technology at banks and modern businesses in general, when looking at previous literature. Only recently have there been more studies surfacing discussing the Internet-of-Things (IoT) which is starting to gradually be adopted by business.

The possibility of all competing businesses within various industries, especially the banking industry, adopting technology-based solutions has made investment in IT a necessity, as this may lead to an "arms-race" of technology-based competition, argues Clemons (1990, cited in, Goh & Kauffman, 2013). The rate at which technologies capable of revolutionising the banking industry is emerging, at an continuously increasing pace and banks are eager to employ these technologies as effectively as possible (Mager, 2019).

According to Mager (2019), banks are increasingly focussing their resources on growth and client-centric innovation as to allow clients better opportunity to benefit from enhanced technology capabilities. Some banks are teaming up with FinTech companies to drive technological change, whereas others have even gone as far as, launching their own innovation labs or hubs that allows for the exploration and development of new ideas and creates an environment that allows for better collaboration, postulates Mager (2019).

This study aims to add to the understanding of how bank customers perceive and experience banking technology. No specific banks will be included/used in this report, but rather the experiences that people in the Pretoria East and Centurion regions have with the use of technology at their individual banks. Banking customers' stance on banking technology will be determined. To do so, the impact that IT/technology has on banks and to a lesser extent non-monetary institutions will be looked at as well as what it entails to satisfy the wants and needs of various types of customers in the banking industry in this modern era.

The main themes that this study will focus on Organisational Development, Banking Technology and Customer Experience. The paradigm used in this study will be discussed and explained along with why it is relevant to this particular study. The theoretical foundation of the study will be explained and discussed as to how it is relevant. In third part of the paper, the research problem and the current literature available on the topic will be combined along with a critical review of that literature. Lastly will be a conclusion based on a combination of the discussions made and literature used in the paper.

2. THEORETICAL FOUNDATION

2.1 Technology Readiness Theory**:**

The constant advancements of technology has resulted in a changes in regards to how services are rendered especially within service firms (Yang & Park, 2011). Yang and Park (2011) also states that, the advances in technology has given rise to Self-Service Technologies (SSTs) which in-turn is leading to an increased shift from interpersonal encounters to technology-based encounters/services.

It is therefore extremely important, as postulated by Lin and Hsieh (2007, cited in Demirci & Ersoy, 2008), that companies, in this case banks, consider the technology readiness of their customers, when looking to adopt or are using Self-Service Technologies. The reason being that, technology readiness (TR) refers to the tendency of people to accept and adopt new technologies for the accomplishments of goals both in life in general and work (Parasuraman, 2000, cited in Buyle, Van Compernolle, Vlassenroot, Vanlishout, Mechant & Mannens, 2018). Based on this, it is clear that the Technology Readiness (TR) Theory is fitting for this research report. The concepts/themes that this study will focus on banking customers, banking technology and organisational development.

2.2 Primary Research Question

What significance does experience of customers with banking technology/digital banking have?

Sub questions:
What is customers' experience with banking technology/digital banking?

3. DESIGN and APPROACH

This study will adopt a qualitative approach to research. The reason for using this research approach is that, this study will explore the opinions and experiences of bank customers with advancing technology at banks in the Pretoria East and Centurion regions. It also allows the researcher to investigate the meaning of people's lives under real-world conditions as well as to be able to consider the perspectives and opinions of the participants involved in the study (Yin, 2010).

Yin (2010) also states that qualitative research consider the contextual conditions within which people live. Further understanding into emerging or existing concepts/themes that may add to the understanding of human social behaviour, as well as using multiple sources of evidence are considered and accepted during a qualitative study, according to Yin (2010). Qualitative research allows for a multitude of different topics and doing so in-depth, according to Yin (2010).

This qualitative study will be approached from an exploratory case-study perspective. The reason being that, it allows the researcher to understand the behavioural phenomena through the perspective of participants (Tellis, 1997). This is exactly what will be done during part of the research process. Interviews will be conducted to establish the views and experiences of a group of bank customers on their interaction with continuously advancing technology at banks. Another reason why this approach is ideal, is because it allows for the selection of a small geographical and/or a limited number of individuals as study subjects, according to Zainal (2007). It will involve explaining a phenomenon within a certain context to understand the nature of the case being investigated (Strydom & Bezuidenhout, 2014).

The interpretivist paradigm will be of use during this study. The reason for employing this research paradigm is because it allows for the interpretation of unobservable, personal subjective narratives and experiences of people (du Plooy-Cilliers, 2014). In other words, it considers the meaning that people attach to phenomena as well as how each individual interpret certain phenomena within a specific context.

The total population of this study would be bank customers across the whole geographical regions of Pretoria East and Centurion. The sample will be bank customers in the Faerie Glen and Zwartkop regions, located in the larger Pretoria East and Centurion geographical regions respectively. The convenience sampling method is most relevant to this study. Pascoe (2014) makes the point that, said sampling method is a non-probability sampling method.

Semi-structured interviews will be best suited for this study. The interviews will be recorded with a mobile phone to allow for the referencing of these interviews afterwards to be as accurate as possible. Semi-structured interviews are advantages as they allow for insightful, sensitive, open-ended questions that consider the independent thoughts/views of individuals in a group as well as one-on-one interviews when that is preferred by respondents (Adams, 2015). According to Adams (2015), semi-structured interviews are also great for individual interviews with primary program managers, frontline service providers and staff, relating to formative program evaluation.

These types of interviews are ideal for topics exploring new territory with unknown but potentially meaningful issues, where the researcher/interviewer needs as much broad but relevant information to identify useful leads and pursue them, according to Adams (2015).

The data will be entered into QDA Miner Lite to be analysed after which the results will be incorporated into the study.

4. LITERATURE REVIEW

4.1 Banking Technology

Changing roles and diminishing boundaries between private and public players are happening, as a result of societal transformation towards a digital economy, argues the European Commission (2013, cited in Buyle, Van Compernolle, Vlassenroot, Vanlishout, Mechant & Mannens, 2018). Better market infrastructure, sophisticated product development, implementation of reliable techniques for reaching varied/diversified markets that are also geographically distant, as well as reliable risk control techniques is what the revolution caused in the banking industry, enabled by IT, according to Marion (2008, cited in Tater, Tanwar & Murari, 2011).

Innovations based around technology are pursued and adopted so that cost reduction, increase in customer demand and satisfaction, service efficiency improvement as well as the development of new delivery channels for new and/or existing customers can be realised, according to Bitner, Ostrom, and Meuter (2002, cited in Rojas-Méndez, Parasuraman & Papadopoulos, 2016) and Liljander, Gillberg, Gummerus and van Riel (2006, cited in Rojas-Méndez, *et al*., 2016). Banks and any business for that matter cannot afford to ignore and not embrace technology in their operations when there are conglomerates such as, Google, Apple and Microsoft, that achieved enormous market capitalisation as a result of technology (Dutta & Mia, 2010, cited in Rojas-Méndez *et al*., 2016). This is a clear indicator of the growing importance that technology has on the daily lives of people, according to these authors.

Big technologically capable corporations are not the only competitive forces pushing banks to increasingly focus on their own technological capabilities, as Financial Technology companies are the more recent market entrants to the financial industry (Handro, 2018). According to Handro (2018), these FinTech companies are more flexible/agile in the online environment than banks and are therefore also a big threat. Worldwide, the digitalisation by banks and the banking industry as a whole has become a priority that is strategic of nature argues Galazova and Magomaeva (2019). Modern financial technologies are the driver or one of the main drivers of change in the banking industry as stated by Rupeika-Apoga, Zaidi, Thalassinos and Thalassinos (2018, cited in Galazova and Magomaeva, 2019).

This supports Mager's (2019) statement, mentioned earlier, that banks are teaming up with FinTech companies to drive technological change or to be competitive. It is therefore reasonable to say that the reason for that, considering the above discussions, is because it is much faster as the FinTech companies already has the technology and the information about what works. The banks therefore face less probability of losing customers, as a result of adapting to late or through trial and error of internal Research and Development of technologically relevant products and services. It is safe to assume that taking this route the exorbitant initial capital investment from the bank would be less so.

Considering all this, it is quite clear that one of the biggest drivers if not the biggest driver of technology adoption or embrace of digital banking and the service channels it makes available at banks, is competition (Alalwan, Dwivedi, Rana & Simintiras, 2016, cited in Mbama *et al*., 2018). A recurring theme in many of the reviewed studies is the ability of an organisation to learn in regards to new technology and the function and use thereof. There is a fixation on learning that has to take place within an organisation to become and remain competitive and relevant in the modern world.

There are various IT-based technologies that are relevant to the banking industry, according to Cavus and Chingoka (2015). These include, - (1) Automated Teller Machines (ATM) - ATMs allow customers to withdraw money whenever necessary without the limitation of time as with a human teller (Acholiya, Keshari, 2012, cited in Cavus & Chingoka, 2015); - (2) Mobile Banking - This channel allows customers to do banking through a smart device via a Mobile Banking Application, that has access to the internet; - (3) Internet Banking - This service channel allows customers to do banking activities through the website of their particular, after they opened an online account with the bank; - (4) Video Teller Machine (VTM) - This service technology allows customers to experience all the branch banking services through a remote connection to a customer service employee via the VTM; - (5) Secure Short Messaging Service (SSMS) - This is essentially an SMS service that banks provide, where the account holder is notified of any activity from the customers' bank accounts, given that their mobile numbers are registered at the bank for this specific service.

Cavus and Chingoka continue to include the following technologies as well, - (6) SIM Application-toolkit - This refers to a standard SIM card with an interactive menu programmed into it, which allows the customer to interact with the network after entering the necessary information in the interactive menu; - (7) Near Sound Data Transfer (NSDT) - This technology use a one-time audio password via a mobile phone. The customers receives these passwords whenever they want to make a transaction, for verification purposes. It is more advanced than secure SMS, considering that it uses various technological advances for a faster, more secure and convenient, contactless payments; - (8) RFID Technology - This technology allows for contactless payments with a use of a bank card with an embedded chip. The card is then placed in front of an RFID reader at a payment point for the transaction to be automatically processed (Dahlberg, Mallat, Ondrus & Zmijewska, 2008, cited in Cavus & Chingoka, 2015); - Telephone Banking or Interactive Voice Response (IVR) - This is Information Technology allows customers to make a call to a specific number provided by the bank and to then interact with the system. The interaction entails the customer choosing from various options through a voice prompt, making use of the keypad or via speaking, considering the voice prompt also utilises voice recognition; - Wireless Application Protocol (WAP) - This allows the customer to use their phone to access a bank's website through via the internet using a browser. Tan (2014, cited in Cavus & Chingoka, 2015) states that, it does so without any specific/dedicated software that has to be downloaded and installed.

The last three banking technologies that these two authors included are, - Unstructured Supplementary Service Data (USSD) - This too is a SMS service, that has a menu and a timed session, during which customers have to choose from a list of available options (Krugel, 2007, cited in Cavus & Chingoka, 2015), rather than replying in sentences as is the case with SSMSs; - Near Field Technology (NFC) - NFC uses two-way radio waves communication and allows for contactless and wireless payments using a smart mobile phone/device. The goal with this technology is shorter queues, faster transactions and less bank cards according to Dahlberg, Mallat, Ondrus and Zmijewska (2008, cited in Cavus & Chingoka, 2015) and lastly; - Mobile Money - This service channel comes from a partnership between banks and mobile network operators which allows people/customers that do not/ are not able to have bank accounts to open a virtual wallet on their phones where they can keep their money. Withdrawals, payments and deposits can be made using Mobile Money (Kemp, 2008, cited in Cavus & Chingoka, 2015).

Considering the technologies mentioned above and their function, it is clear that they are adopted for the convenience of customers, which in the modern world is what people/customers want more of. It also allows them to reach individuals who are not able to bank in the traditional way and need alternative options that allows the banks to penetrate new markets and gain new customers which in-turn ultimately leads to more monetary income for the banks. It therefore is clear that the convenience of customers is a big role player in the success and development of banks and more and more businesses in general, with the added benefit of cost savings.

4.2 Customer Experience

Banks or any financial services firm for that matter, in the current competitive economic/market environment, need to determine the most relevant/suitable banking channels for the varied customer segments that these institutions serve, according to Aaltonen, Markowski and Kirchner (2012). These authors also argue that these financial institutions need to be able to predict, which customers are willing to embrace technology as a substitute for personal service and still be greatly satisfied and which of their customers will demand services that are personal in nature.

Just as technology adds to the business operations of the banks and other financial firms, it also adds to the user/customer experience such as, convenience, control and freedom of action, as postulated by Westjohn, Arnold, Magnusson, Zdravkovic and Zhou (2009, cited in Rojas-Méndez *et al*., 2016). Tater *et al*. (2011) adds to these benefits that of self-service, lesser/no constraints on time and place as well as a decrease in queues and thus a decrease in stress related to it.

As mentioned before, drivers of technology at banks are in part big technology companies/conglomerates (Google, Apple etc.), as these companies provide customers with digital experiences which in-turn leads the customers to expect these types of services from other organisations and/or industries as a whole (Handro, 2018). In layman's terms this would suggest that, if other organisations and/or industries are not able to provide the same or at least similar types/level of service experiences, that customers would ultimately be dissatisfied and seek alternative services that do provide such services experiences. This means that banks need to be able to continuously provide customers with improved service experiences focused around technology to be able to stay relevant, not only in the banking industry but the market and/or economy as well, according to Richard and Jones (2008, cited in Rizwan, Rehman, Rizivi, Khan, Ayuub, Baloch & Sardar, 2014).

In modern society, customers continuously become more demanding, as they seek the latest technology and a quicker response of services than before (Rizwan *et al*., 2014). Banks therefore continuously need to try and ensure the satisfaction of their customers as this leads to customer retention through future purchases (Mittal & Kamakura, 2001, cited in Rizwan *et al*., 2014). Mittal and Kamakura (2001, cited in Rizwan *et al*., 2014) argue that, if banks can satisfy their customers' wants and needs, that it might lead to them sharing their favourable experiences with others. This, evidently create the possibility of new customers.

Businesses' drive to adopt innovative technologies are allowing customers to provide services to themselves (Chen, 2005; Sheth & Sisodia, 2006, cited in Berndt, Saunders & Petzer, 2010). This holds benefits to customers along those mentioned before which include, increased perception of control, speedier service delivery, improved access to services and financial savings realised when using these services, according to Berndt *et al*. (2010). Meuter, Bitner, Ostrom & Brown (2005, cited in Berndt *et al*., 2010) argue that, customers expect organisations, in this case banks, to adopt and embrace new technologies and gain a competitive advantage, thus giving merit to engaging technologies to possibly improve the organisation's (bank's) reputation amongst customers.

Considering this discussion, one can make the argument that this creates a perceived value or pre-conception, among customers, about a banking product or service experience. This perceived value or preconception might lead to the customers considering and ultimately trying/using said technology and/or service experience, as argued by Keisidou, Sarigiannidis, Maditinos and Thalassinos (2013, cited in Mbama *et al*., 2018).

Even though there are the above mentioned expectations of bank customers in relation to technology adoption and the experience that they demand through services as well as the banks need to stay competitive, there are considerations that the banks need take when adopting new technologies.

Some customers may not be as physiologically ready as others when it comes to the adoption/frequent use of new technologies in their personal lives (Rojas-Méndez *et al*., 2016), as some of these services may, among other things, have become too technologically sophisticated for them (Lin & Hsieh, 2007, cited in Rojas-Méndez *et al*., 2016). Along with this, banks also need to consider the competencies as well as the preferences of their customers, thus meaning they are limitations to the adoption of advanced technologies, according to Zhu, Nakata, Sivakumar and Grewal (2007, cited in Rojas-Méndez *et al*., 2016).

This simply means that even though banks adopt the latest technologies, does not mean that all their customers would be able to use them, which inherently will lead to a bad experience for them and most likely even a loss of customers for the bank. Jun and Cai (2001, cited in Dhurup, Surujlal, Redda, 2014) contend that customers' service encounters with banks, both tangible and intangible, greatly influences their perception of service quality. This will also, considering all that has been discussed, be a determining factor with regards to the bank(s) being able to realise the savings and ultimately the profits expected when adopting the latest technology. This is an important factor, as service quality is an extremely important aspect of customer experience when it comes to retail banking, which is also used to measure organisational performance, according to Al-Hawari & Ward (2006, cited in Dhurup *et al*., 2014). This then links in with organisational development.

These factors relating to customers and their willingness to embrace new technology fits really well with the Technology Readiness Theory that is used in this report/paper. This is because these various factors determining whether customers are willing to adopt and embrace new technologies refer to, how ready they are to do so, whatever the reason to embrace or not embrace might be. Along with these individual and personal factors affecting the willingness of technology adoption, there are also other factors relating to the technology itself as well as the banks. These factors, according to Saxena and Al-Tamimi (2017, cited in Cvijović, Kostić-Stanković & Reljić, 2017) include among others, security, available infrastructure, regulatory forms etc.

Employees too has a role to play in the experience customers have when interacting with banking technology. When the employees of an organisation is afforded the opportunity to become IT literate, the business inherently created a greater chance for success and efficiency by having more qualified personnel being able to contribute by proposing and suggesting innovative banking products that is aligned with the banking business (Behera, Nayak & Das, 2015). In other words, the organisation has ensured more brain-power for idea generation and innovation.

Considering this and the fact that many of these employees have direct contact with customers, where there are service contact points, might lead to quicker results, as these employees may have a better idea of what customers' wants and needs. Therefore, urging input from employees may improve the chances of success regarding which technologies to adopt and which not, may also lead to capital savings for the banks as investment in technologies that are not in line with customers' preferences are lessened.

During the process of new technology adoption, banks should keep in mind five types of customers that they might experience. These five types of customers are, explorers, pioneers, sceptics, paranoids and laggards (Parasuraman & Colby, 2001, cited in Demirci & Ersoy, 2008). There are also four main characteristics that accompany these customers which should also be brought into consideration. They include, optimism, innovativeness, discomfort and insecurity, according to Parasuraman and Colby (2001, cited in Demirci & Ersoy, 2008). These factors relate to the technology readiness of customers.

According to Kaushik and Rahman (2015, cited in Cvijović *et al.*, 2017) customers' attitude to online-services as well as the shift towards self-service technologies in banking are for the most part positive. Although that may be the case, various studies explored during the research of this paper revealed that, there are a number of authors that are worried about banking becoming to technology oriented and too little personal interaction, as well as uncertainties and financial safety concerns. One of these authors is Sharma (2016), whom argues that one of the biggest concerns to customers in regards to electronic-banking, in particular internet banking products and services is the security of online financial transactions. Parasuraman (2000, cited in Berndt *et al*., 2010) mentions that there is increasing proof that consumers are looking for an improved balance between personal contact and technologies and also that they are becoming increasingly frustrated in dealing with technology based services and products.

Considering the above discussion, it is clear that the experience of customers are mixed, when it comes to satisfaction in using banking technology.

4.3 Organisational Development

The interpretivist paradigm is fitting for this paper, as part of this paradigm is the view that a single phenomenon might have multiple interpretations (Pham, 2018). Additionally, this study is focused on bank customers and the experience and perception that they have with technology used in the banking industry through the use thereof. This paper tries to get a better understanding of a specific phenomena which, in this case is, as previously mentioned, bank customers' experience with and perception of banking technology. Therefore, this paper is studying a phenomena within a unique context rather than a generalised one, as is another characteristic of the interpretivist paradigm according to Creswell (2007, cited in Pham, 2018). Furthermore, the literature available about these themes are very scattered and therefore new researchers looking for information about these themes has to combine arguments and research of various studies. This means that interpretation of the combined information is going to happen to some extent. Also, researchers who engaged in a qualitative study and did field research also interpreted the information gathered through face-to-face interviews to get as accurate as possible results to publish.

The traditional customer-service employee encounter has largely changed to a customer-technology encounter as a result of continuous advances in technology (Wikström, 1996, cited in Yang & Park, 2011). Companies are continuously looking for new technology to incorporate into their business operations/ activities and this impacts the performance of these organisations as well as allowing them to provide or bring forth various technology based services for customers, according to Tang and Park (2011). Yang and Park (2011) argue that if customers know their role in regards to the adoption and use of technology, has the motivation/willingness to use the technology adopted by firms (in this case banks) and also have the skills to use said technology, it leads to consumers/customers being co-producers which adds productivity to the firm(s).

Anderson and Mittal (2000, cited in Yang & Park, 2011) postulates that customer satisfaction is linked to the outcomes of Self-Service Technologies that then lead to firms' financial gain/profit. This simply means that, in relation to banks, if the customers are able and willing to use the technologies introduced by banks, the experience they have and the level of satisfaction will reflect in the finances of the companies.

Considering this, it is clear that if banks or any business for that matter understand and know their customers to ensure that changes are made if customers are unsatisfied with their interactions with the adopted technology and thus try and ensure a positive experience for customers. This way, customers' experience and interaction can have a positive impact on the organisation. That in-turn then leads to organisational development.

If banks do not continuously introduce new technologies to their service delivery structures, they will lose a large portion of customers, as a result of increasingly tough competition in the banking sector (Galazova & Magomaeva, 2019). Digitisation through IT also allows for mobile banking and other channels of electronic banking which in-turn allows for close/ exact personalisation of offerings to customers' needs according to Floh and Treiblmaier (2006, cited in Tam & Oliveira, 2016). This, as postulated by Hoehle and Huff (2012, cited in Tam & Oliveira, 2016) allows for cost savings for banks as there is fewer need to visit a bank branch as a result of simpler banking operations (egg. bill payments) being done through self-service technologies. This in turn, may also lead to cost savings for customers.

Banks are able to reduce the cost of skills and resources of an individual business through economies of scope as it is the division of the use of said skills and resources among two or more organisations and/or joint production in a multi-product company (Hofstrand, 2019; Mcgee, 2014). This is what IT/technology affords the banking industry.

5. METHODOLOGY

5.1 Research Design

The interpretive paradigm was used for this study seeing that the research was done to gain a better understanding and increased knowledge of the perception that bank customers have about the use of banking technology. Therefore, this study looked at learning from individuals (bank customers) as well as constructing an understanding from the view of the participants, which is what the interpretivist paradigm sets out to do when applied (Atieno, 2009). In other words, the researcher looks at the information gathered from the perspective of the individuals being studied, looking at the meaning, assumptions, backgrounds, reality, social context etc. that the participants find themselves in (Wahyuni, 2012) and then interpreting that information accordingly. By using the interpretivist paradigm means that social reality can have multiple perspectives and thus that it can change as a result of the individual perspectives and experiences being subjective as per individual (Hennink, Hutter & Bailey, 2011, cited in Wahyuni, 2012; du Plooy-Cilliers, 2014).

Therefore, considering the above mentioned discussions, it is clear that the interpretive paradigm was best suited for this study.

This paper has adopted a qualitative approach to research. The reason for using this research approach was that, this study explored the opinions and experiences of bank customers about banking technology in the Pretoria East and Centurion area, and it allows the researcher to investigate the meaning of people's lives under real-world conditions as well as to be able to consider the perspectives and opinions of the participants involved in the study (Yin, 2010). Yin (2010) also states that qualitative research consider the contextual conditions within which people live.

Furthering the understanding into emerging or existing concepts/themes that may add to the understanding of human social behaviour, as well as using multiple sources of evidence are considered and accepted during a qualitative study, according to Yin (2010). The use of these multiple sources makes the study more reliable as the data is more reliable (Creswell, 2009, cited in Elmabruk & Almwber, 2018). Qualitative research allows for a multitude of different topics and doing so in-depth, according to Yin (2010).

By making use of qualitative research and data analyses enables the researcher to create new levels of knowledge and forms of opinion and this in-turn can change perspectives and actions, according to Krauss (2005). This is part of the purpose of this study, in that it will contribute towards research done previously on the perception of bank customers' perception about continuously advancing banking technology. It may just provide a different/new perspective on the topic as well as change or form new opinions.

In research there are four fundamental believes, which differ depending on the research paradigm used. In this study these believes were viewed through an interpretivist paradigm as the objectives of this study fits with this research paradigm. The four believes are Ontology, Epistemology, Axiology and Methodology. Expressing the nature and structure of the world, what we believe about reality is what ontology focuses on, according to Wand and Weber (1993, cited in Antwi & Hamza, 2015) and Richards (2003, cited in Rehman & Alharthi, 2016). The process by which knowledge is acquired, justified and shared/communicated to others, as well as the nature of knowledge itself is what epistemology is focused on, according to Gall, Gall and Borg (2003, cited in Rehman & Alharthi, 2016) and Cohen, Manion and Morrison (2007, cited in Rehman & Alharthi, 2016). When it comes to the ethical considerations during the planning process of a research proposal it refers to axiology and its encompasses a philosophical approach to making the right or valuable decisions, according to Finnis (1980, cited in Kivunja & Kuyini, 2017). Lastly, Methodology which refers to a systematic way in which the research is to be conducted to gain knowledge on a subject as stated by Rajasekar, Philominathan and Chinnathambi (2013).

Researchers Saunders, Lewis and Thornbill (2009, cited in Wahyuni, 2012), Guba and Lincoln (2005, cited in Wahyuni, 2012), Hallebone and Priest (2009, cited in Wahyuni, 2012), and Neuman (2000, cited in Aliyu, Singhry, Adamu & Abubakar, 2015) has defined the fundamental beliefs through the various paradigms. The views through the interpretivist paradigm, as it was the relevant paradigm for this study were - The ontological view refer to the nature of reality as being complex, socially constructed, flexible/fluid, subjective and multifarious., - the epistemological view refers to the nature of knowledge as being subjective meanings and social phenomena created by individuals to generate meaning in their lives., - the axiological believe is of the view that the researcher cannot be separated from the research and will be subjective and also that the research is value dependant., - lastly, the methodology for the interpretive paradigm is qualitative.

The qualitative approach and interpretive paradigm compliments each other well considering the above mentioned discussion about the methodological view of the interpretivist paradigm which is largely if not entirely qualitative.

Numerous literature on the various topics within this paper was studied and reviewed. This too supported the reason for using a qualitative approach as the findings, educated opinions (in certain instances) and interpretations of collected data of previous researchers of the various topics included in this paper were analysed and included in this study. The use of statistical/ quantitative data of previous literature was very rarely used/considered, if at all during progression of this paper, considering the fact that interpretive research use methods that generate qualitative data, although quantitative/numerical data could/may be present it is not relied upon postulates Rehman and Alharthi (2016) . This study therefore only looked to explore the understanding/ experience of previous researchers on the specific topics as well as that of the subjects/people that were included in their studies and how they interpreted the feedback of those respondents. Lastly it also made use of semi-structured interviews to gather data from random bank customers.

Considering the fact that this paper was done with the use of the interpretive paradigm the research was done inductively. By doing the research inductively enables the researcher to examine and/or observe reality(subjective)/ events to for certain re-accruing phenomena or patterns arising from the data and then categorising them into themes, concepts etc., from the detailed information gathered as stated by Atieno (2009), Hussey and Hussey (1997, cited in Aliyu, *et al*., 2015), Neuman (2000, cited in Aliyu *et al*., 2015) and Antwi and Hamza (2015). As such various relevant literature was studied and participants interviewed for this paper after which the data was examined and conclusions made. It therefore means that the data preceded any theories and conclusions as stated by Cohen, Manion and Morrison (2007, cited in Scotland, 2012). This simply means that any interpretation of data is only made once sufficient information has been collected and no preconception are being made beforehand.

During this study, previous literature was firstly studied before any interpretation or theorising about the topic took place. The researcher therefore had no preconceptions about the experiences and perceptions of banking customers in regards to their use of advancing banking technology other than the natural bias/subjectivity of the researcher.

This paper was an exploratory research study as the researcher had a limited amount of knowledge about the research problem/issue and exploratory research helped ensure that a better understanding was gained about the topic/problem (Bodla, 2006). The research conducted in this paper is only to contribute to research already done about this specific topic and much more subsequent research will have to be done (Bodla, 2006; Chawla, Sondhi, Sharma & Wadehra, 2018).

This too was a reason why the exploratory approach to this research was chosen. In other words this study related the experience of bank customers' interaction with advancing banking technology to only two geographic regions, Pretoria East and Centurion, and only a few customers in those areas. Add to this the fact that this took place in a third world country, South Africa. This was a limited selection of individuals in a small geographical area, which was another supporting factor for using an exploratory approach as it allowed for that to be possible as stipulated by Zainal (2007).

This was but a few of the variables that may have an impact on the viability of the study. With that in mind, the previous literature studied on the topic and/or the various parts of the topic also had their own variables that came into play and that has to be considered. Therefore, this study is only a small contribution towards a better understanding of the topic/problem and the different parts of which it consists and to do so from the perspective of the participants (Tellis, 1997). To really understand the experience of bank customers with their interaction with advancing banking technology, a very relaxed research structure has to be adopted in order to gather as much un-altered/influenced information and to truly try and do so from the view of participants which exploratory research allows the researcher to do according to Chawla *et al*. (2018).

This paper was done with the help of the case study method. Various previously written literature that were similar to the topic of this study was reviewed (in-depth analysis) to gain a clearer understanding of the phenomenon under investigation, which is what the case study method allows the researcher to do according to Bodla (2006) and Creswell (2014). In other words, the case study method promotes extensive exploration of a current real life phenomenon/situation in its natural environment as stated by Woodside (2010, cited in Wahyuni, 2012) and Yin (2012, cited in Wahyuni, 2012). The case study method allowed the researcher of this study to try and describe the real life relationship between advancing technology and bank customers with a focus on bank customers in the Pretoria East and Centurion areas (Igwenagu, 2016).

The case study data collection method fits really well with the exploratory research approach used for this study as both look at phenomena in its specific contexts and allows for as much data to be collected as needed. This again fits well with the interpretive paradigm through which this study was conducted. The reason being that, as discussed earlier, the interpretive paradigm makes use of inductive research which means that the researcher firstly gathered data after which said data was interpreted. The researcher therefore waited for the data gathered to determine the direction in which the study were to go in. This means that the interpretive paradigm provided the perfect conditions for the case study design and exploratory research approach to be really well utilised. This study thus made use of a exploratory case-study approach.

Dan (2018) argues that non-empirical research refer to the consideration of past literature and/or particular instances/aspects of social life. In relation to this paper, past literature that discusses the topic of, the experience of banking customers with advancing banking technology, or the individual parts thereof was considered. The experience that customers have when interacting with banking technology was therefore considered to be a certain aspect of social life. This too referred to phenomena within a certain context and considering the previous discussions, it fitted well with both the interpretive paradigm as well as the case study method. The reason being that, both look at the context from which the data has been brought forward. Therefore this study was a non-empirical study focused on the review/assessment of literature.

A cross-sectional study refers to a study based on data that was all gathered within a short period of time after which no follow-up data was collected as stated by Fox and Jennings (2014). Therefore, this was a cross-sectional study, as the data was be gathered and the study done in a reasonably short period of time.

5.2 Research Plan

When it came to the gathering of new data for this study, the unit of analysis that had been used was bank customers and their experience and opinions of banking technology (Kumar, 2018). The total population of this study was bank customers across the whole country. The sample was bank customers in the Pretoria East and Centurion areas within the greater Gauteng region, South Africa. The convenience sampling method was most relevant to this study. Pascoe (2014) makes the point that, said sampling method is a non-probability sampling method. The participants are picked from the population by the researcher as stated by Alvi (2016) and Vehovar, Toepoel and Steinmetz (2016). Hence the reason that the paper did not investigate the whole population and therefore the individual units of the population did not get an equal chance to participate in the study as is the case with probability sampling (Alvi, 2016). This fitted well with the cross-sectional nature of this study.

The reason for the employment of the previously mentioned sampling method was based on the restricted time available for the study. The sample size of this study was three participants which was also as a result of the limited time that was available. More time would have meant more participants and the chance to have reached data saturation.

Semi-structured interviews was used to gather the data required for this study. Considering that the study was done from an interpretive paradigm that made use of an exploratory approach, the researcher had to probe various points of feedback from the participants in order to get a true understanding of a phenomenon from the perspective of said participants. As such, the semi-structured interviews was best suited for this study as it allows for insightful, sensitive, open-ended questions that consider the independent thoughts/views of individuals in a group as well as one-on-one interviews when that is preferred by respondents as postulated by Adams (2015). The interview schedule was attached to this study as Appendix B.

The questions of the semi-structured interviews were prepared in advance and was mostly open ended questions that allowed for further exploration of feedback from participants (Nieuwenhuis, 2020). This is exactly why this data collection method was best suited for this study. Semi-structured interviews allowed the researcher to, really explore the data gathered from the various views of the participants as the interpretive paradigm set out to do. According to Nieuwenhuis (2020), semi-structured interviews also allow the researcher to compare previous literature to the newly gathered literature.

With that said, the semi-structured interviews was done with individuals. Therefore, in part it can be argued that individual interviews also formed part of the study and was somewhat intertwined with the semi-structured interviews. The reason being that, individual interviews also explore the values, beliefs, understanding, feelings, perspectives and experiences of individual participants on a certain topic/issue (The Open University, [*s.a.*]) and Ryan, Coughlan and Cronin (2009).

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The method of data analysis that was most suited for this study was the historical-hermeneutic method as its goal is the understanding of a phenomenon (du Plooy Cilliers, 2014), which is what this study was trying to achieve.

These interviews were recorded with a cell phone which allow the researcher to revisit what the bank customers said exactly and in so doing, ensured more accurate accounting of the conversations. It was also used to compare to the notes taken, which was also done to ensure as much and as accurate as possible data was gathered from the participants. As such, this part enhanced the trustworthiness of this study.

After doing the interviews, the recordings was mostly transcribed using transcribing software, which in this study was Otter.ai. This program transcribed most of the interviews after the researcher uploaded the recorded files onto the software for processing with the use of Artificial Intelligence. Otter.ai is an online based software.

The data gathered from the semi-structured interviews was analysed with the use of qualitative data analysis software (QDAS). Using this software assisted the researcher in reasoning, thinking as well as with the mental processes according to Nieuwenhuis (2020).

The QDA software that was employed for this study was QDA Miner Lite. QDA Miner Lite was be responsible for coding the data gathered from the interviews with the banking customers. That is the purpose of that type of software states Nieuwenhuis (2020). This means that the program looked for themes in the data and then categorized those themes under a certain identity for easier recognition. Using QDA Miner also improved the rigour of this study (Nieuwenhuis, 2020).
To improve the trustworthiness of this study the researcher tried to abide by the criteria of trustworthiness within qualitative research throughout the study. The criteria of trustworthiness in relation to qualitative research include credibility, transferability, dependability, conformability and reflexivity as stated by Lincoln and Guba (1985, cited in Korstjens & Moser, 2018) and Koonin (2014). Lincoln and Guba (1985, cited in Korstjens &

Moser, 2018) give the following explanations of the different aspects that make up trustworthiness, - credibility relates to the accurate interpretation of participants' views and if plausible information was drawn from the original participant data, - the extent to which qualitative research results are transferable to other contexts with different respondents is, transferability, - the stability of the research findings over time as referred to as dependability, - conformability is the extent to which the research findings can be confirmed by other researchers, - the last is reflexivity which refers to self-examination by the researcher about the topic under investigation. Each of these aspects are relevant and applicable to this study and the data collection process that is going to be undertaken.

To try and ensure the enhanced trustworthiness of this study in relation to the various aspects that make up trustworthiness in qualitative research, the researcher made use of different strategies to do so. These strategies were prolonged engagement, persistent observation, triangulation, member check, thick description, audit trail and diary (Lincoln & Guba, 1985; Sim & Sharp, 1998, cited in Korstjens & Moser, 2018). These different strategies were employed where relevant during the research process to ensure that the different aspects of trustworthiness was abided by. By doing this, the researcher ensured that the rigour of the study was also inherently improved.

5.3 Anticipated Contribution

Even though this study focused on bank customers in the Pretoria East and Centurion regions, and their experience with and opinion of advancing banking technology. It will hopefully contribute to wider research on the topic about the perception that bank customers have about advancing banking technology in general and whatever else that may lead too, as well as the value it holds for banks.

Simply put, the main contribution of this study will hopefully be a small added contribution to previous literature done on this or similar topics that enables a better understanding of the phenomenon that is customers experience with digital banking.

6. PRESENTATION OF FINDINGS

The research conducted was to investigate the experience that bank customers have with the use of banking technology as well as their perception thereof. The participants was referred to as, P1 for Participant one, P2 for Participant two and P3 for Participant three . The data received through the interviews conducted were uploaded to QDA Miner Lite to do the coding thereof. The findings wass presented and discussed. The themes that this study set out to investigate have been addressed and the research question answered. Even though predetermined themes were investigated, there was themes that arose during the interviews which were included in the discussions where relevant. Some of themes were combined into one. The findings were as follows:

- *Customers' Views/Perception*

  Out of the three participants interviewed only one (P2) did not have an entirely positive (mixed) perception of the advancement of banking technology. The other two (P1 and P2) participants' perception were positive.

- T*rust towards banks in regards to safety with the advancements of banking technology*

  All three participants - P1, P2 and P3 - stated that they have trust in their banks to keep their finances safe even though banking technology is continuously advancing.

- *Banking technology's ease of use*

  As with comfortability, all three participants - P1, P2 and P3 - stated, that they find banking technology easy to use.

- *Digital Banking Vs. Traditional Banking*

  This category will also include three themes which is, - complete digitalisation;- the preference of the type of banking, traditional or digital, the participants prefer,- as well as their preference in regards the type of assistance, human or technological, when experiencing difficulties.

  All three participants, P1, P2 and P3 all stated that they prefer assistance by humans when problems arise. Only one participant, P1, stated that they would not mind if banking became completely digital. P2 and P3 stated that they would mind it if banking were to be completely digitalised. Neither of the participants, P1, P2 or P3 stated any preference for traditional banking only. One participant (P1) preferred digital banking whereas P2 and P3 preferred a combination of both.

- *Associated benefits of banking technology*

  There were three main benefits identified, time saving, convenience and cost savings. All three participants - P1, P2 and P3 - all believe that they save time banking digitally. When it comes to cost savings, one participant - P1 - , does not believe there is cost savings associated with digital banking. P2 and P3 do believe there are cost savings. P1, P2 and P3 all agree that digital banking is convenient.

- *Satisfaction with assistance provided through the use of technology*

  Only two participants, P2 and P3, stated that they are satisfied with the assistance received through the use of banking technology. The third participant, P1, were not satisfied with said assistance.

- *Customer expectation in regards to banking technology adoption*

  Only two participants (P2 and P3) expect their banks to adopt the latest technology in the banking industry. The third participant (P1) does not expect their bank to adopt the latest technologies available in the previously mentioned industry.

- *Comfortability using banking technology when working with finances*

  All three participants - P1, P2 and P3 - stated that they are comfortable using banking technology when they work with their finances.

- *Adaptability towards new banking technology*

  Only two participants (P1 and P2 find it easy to adapt to new technologies that their banks implement. The third participant (P3) does not find it easy to adapt.

7. INTERPRETATION OF FINDINGS

The view/perception of the advancement of banking technology

Two participants (P1 and P2) believe and feel that the advancement of banking technology is a good thing. With that said, P1 did state that there is some factors that can be better. One such factor is the adoption of new technologies. - .

"...when it comes to, you know, getting rid of, or incorporating new technologies, such as using your phone or your watch or anything like that, it's not really picked up in South Africa" - .

Even though this may be the case, the positive outlook is attributed the fact that the participant did feel like the banking industry in South Africa is "pretty decent with advancements", referring to online banking and forward detection. The participant also refered to the successful adoption of card machines in both, big and small business in SA compared to overseas. -

"So the fact that you can get that as a small business, and it's not expensive to pay per transaction means it's one of the few advancements in South Africa, almost any shop that you go into, will have a card machine, you will not find a shop that doesn't have one."

The second participant (P3) attributed the positive outlook in regards to banking technology advancing to two of the three discussed associated benefits. This refers to the time savings and convenience. -

"It saves time, sometimes. It's convenient."

The third participant (P2) has a mixed view in regards to the advancement of banking technology in that they view it as a "good thing" and it provides security, as a reason. Along with that the participant also expressed a negative view towards banking technology advancing, being of the opinion that it becomes to advanced for customers. -

T*rust towards banks in regards to safety with the advancements of banking technology*

All three participants (P1, P2 and P3) trust that banks keep their money safe through the advancement of technology. P1 mentioned that personally there is not any outstanding factors that the individual feels is, too big a threat. With that said the participant (P1) did mention a few factors that is of some concern but, not overly so. -

"For me personally, no, I think as long as you're careful, you know.";"... two big things in South Africa, that's an issue is, debit orders and credit card fraud."

These factors are, debit and credit card fraud, the ability to steal in small increments, copying cards' magnetic strips and lastly the lack of measure to prevent sim-swaping. The participant (P1) did also mention machine learning, which is technology increasingly used by banks, that is improving fraud detection which, according to P3, is already pretty decent. -

> *"Fraud detection (by the banks) is pretty decent... So these days, it is a bit better with you know, forms of like, machine learning that that can flag you know, fraudulent transactions with transactions that seem fraudulent."*

P2 cited the technological sophistication of criminals and that it is something we will never get away from, as the reason for not being entirely positive and having mixed opinions about the advancement of banking technology.-

> *"I believe so, up to a point. But I also believe that the advancement of technology by the criminals is of such a nature that you will always be vulnerable to criminals."*

A factor that came up during the interview with P3, is situational aspects, as the respondent referred to having multiple bank accounts at three different banks. The reason that there is situational circumstance is because, with two of the banks, the respondent has trust they do all they can to keep money safe. With the third bank, the respondent has their reservations about its effort towards financial safety and therefore has limited trust.

Banking Technology's ease of use

All three participants (P1, P2 and P3) find banking digitally easy. P1 referred to the ability that makes it possible to, quickly use their phone. open the banking app, go into their account and then do the transaction. P3 referred to it being "*straightforward*" and also to the fact that it is "*improving on a regular basis*". The last participant does not specifically mention why they find it easy, just that they do.

Digital Banking Vs. Traditional Banking

The reason that this category includes three themes is that, human interaction arose out of discussions about each individually and seems to be fairly significant in regards to each of them.

Only one participant (P3) prefers a combination of both types of banks, whereas P2 and P1 prefer digital banking. Both of the latter two participants stated convenience as a factor for their preference and P1 also stated safety as another factor. P3 believe that where there is human interaction and crimes do take place such as, fraud, that it will be easier to determine who the culprit is. With this in mind, the argument can be made considering the above mentioned themes where convenience has already arose that the main perspective leaning towards digital banking for P3 is, convenience.

P1 was the only participant of the three, that would not mind complete digitalisation of the banking industry. The participant also went as far as to say that they would prefer it and once again mentioned convenience as a factor for their preference. Along with that, the participant also feel it would be physically safer, as there will not be any physical money to steel during transit between two points. P2 and P3 both cited human contact as the main reason why they would mind if their bank went completely digital. Even though P2 prefers digital banking over traditional banking, the participant still wants human contact as a backup for when technology fails. P2 argued that without humans, there is no face to take responsibility when things are not up to par.

Associated benefits of banking technology

All three participants (P1, P2 and P3) experience convenience in banking digitally and has mentioned it multiple times at various points throughout the interview. When it came to cost savings only two (P2 and P3) feel like they save money by banking digitally oppose to traditionally. The third participant (P3) argued that, because of convenience they tend spend more and also that the fractional charges that accompany digital banking as well the fact that in most case you pay extra for being able to bank online, there is no difference in going to a branch or doing it digitally. P3 did not particularly mention time savings but did mention the ability to do things quickly, which could be related to saving time. P3 also stated that they don't have wait in a queue, which too can be related to saving time. As for P2, time is the most important benefit, as the participant specifically said so.

Satisfaction with assistance provided through the use of technology

This category related to the participants' satisfaction when receiving assistance through the use of the various technologies (telephone, real-time chat/assistance etc.) that the banks have adopted to make interaction between the organisation and its customers easier. P1 stated that they prefer going to a bank branch when experiencing difficulties that requires support/assistance as, according to the participant, "having to wait for someone to reply to your support email usually takes longer than just going into a branch and having them sort it out right there". The participant (P1) did also state that if they had the perception that those technologies were just as effective as walking in to a branch, they would most likely find it more satisfying. During the interview there were also mention of quality of the phone calls that is poor.

The latter part of the above discussion, relating to participant's perception of technologies used for support/assistance, coincides (at least in regards to the sample size used) in part with the arguments made by Jun and Cai (2001, cited in Dhurup, Surujlal, Redda, 2014). These authors contend that customer service encounters with banks, tangible and intangible, greatly impacts their perception of service quality This supports the importance of perception of customers towards their banks or any organisation for that matter.

P2 find the assistance through technology satisfactory, citing successful resolving of problems whenever they had any. With P3, another situational circumstance arose in that it is bank specific. The participant (P3) stated that they are only satisfied with one of three banks that they are a client at.

Customer expectation in regards to banking technology adoption

The first participant (P1) does not expect their bank to adopt the latest technology as they believe that proven security and stability of the technology is more important and that, in most cases that is not a characteristic of *"bleeding edge"* technologies. Taking this in to consideration, it seemed this participant seeks as much certainty as possible, even if it means not having the latest technology.

The other two (P2 and P3) expects their banks to have the latest and most advanced technologies available in the banking industry for customer interaction. Although P2 stated that they do expect their banks to have the latest technology, they did not specify as to why they expect it. Considering this and what has been said by this participant (P2) about, digital banking introducing more security as well as the benefits (saving time, cost savings and convenience) they experience that, the participant might feel that those factors might improve when the latest technology is made available.

P3 feels that their bank should implement the latest technologies, as the participant believes it will help prevent corruption, make it easier to communicate and also, it makes the participant feel more comfortable in their banks' efforts to keep their finances safe against hackers. Considering this, it is clear that participant's expectations is predominantly focused on the possibility of improved security. The data collected from participants (P1, P2 and P3) for this study, relating to banking technology adoption, supports the argument of the authors Galazova & Magomaeva (2019). They explain that banks will lose a significant portion of their customers if they do not continuously implement the latest technologies in their service delivery structures, as a result of fiercer competition.

Comfortability using banking technology when working with finances

All participants (P1, P2 and P3) find it comfortable to use technology when they are working with money. This can be interpreted in different ways, as it can be seen as the participants trusting their banks to keep them safe when using technology or that they trust the banks to implement safe and proven technologies. It can also be that, they trust in their ability to use the technologies enough so as to be comfortable to do banking activities using said technologies. Also, it could be interpreted as the trust the participants have in banking technology. P3 did state, as mentioned earlier that they do expect their bank to adopt the latest technologies in the industry, citing comfortability as a reason. This can in particular be related to the possible trust the participant has in technology.

It has to be mentioned that a situational circumstance arose again in during this with P3. This situational circumstance also related to, only two of the three banks that P3 are a client at, do they feel comfortable using technology while working with their finances.

Adaptability towards new banking technology

Regarding this category, P1 find it easy to adapt to new technologies implemented by their bank. The participant cited the continuous improvement of usability as a factor that attributes to the ability to adapt easily to new banking technology. Also, a potential crucial factor was mentioned by P1, which is that the participant works in the IT industry. This could possibly bring rise to technological awareness as a possible variable. P2 does not find it easy to adapt to new technology implemented by their bank and cited, being "technologically disadvantaged". When it came to participant P3, the participant was not sure if they adapt easily to technology, but stated that they, believe to be able to adapt to new banking technology, easily. When listening to the participant it seemed as if the participant were considering the fact that there might just be new technology to which they are not able to adapt easily to.

A theme that came to the fore a lot during the interviews, as mentioned above, is convenience, which is one of the main factors that contribute to user experience as stated by Westjohn, Arnold, Magnusson, Zdravkovic and Zhou (2009, cited in Rojas-Méndez *et al*., 2016). The data collected, therefore supported the argument made by these authors. What is made clear by the findings and discussions above is that there are numerous variables playing a part in the experience customers have with digital banking. Another thing that became apparent is how some of these categories intertwine.

8. RESEARCH OBJECTIVES AND RESEARCH QUESTION ADDRESSED

8.1 Research Question

What significance does experience of customers with banking technology/digital banking have?

During this study, it was found that the customers' experience with banking technology has great significance as the one feeds the other. As mentioned by previous studies, the wants and needs of customers are constantly changing, which gives rise to different expectations. From the research studied, it is clear for the most part that that the various technologies satisfy the wants and needs of customers. This too is supported by the collected data from participants of this study, as the majority seems to have positive experiences for the most part with digital banking. Which means, for the most part, various factors that contribute to customer experience as mentioned by participants indicate that customers are satisfied by banking technology at their different banks. This in-turn leads to a positive experience for customers, which is encouragement for the development and adoption of new banking technologies for banks. All this is proof that the research question was answered.

The amount of variables that clearly play a role in customers' experiences is just too much to fully solve the problem statement. Not to mention the possible variables that data analyses might suggest. This study added to the possibility of solving the research problem, as some of the aspects of the problem were addressed. Pre-empted aspects/factors and ones that arose during the data gathering and analyses process. The goal of the study on the other hand was reached as the chosen phenomenon was explored/ investigated and a decent amount of information was collected from participants, which adds the understanding of the phenomenon.

9. LIMITATIONS, ETHICAL CONSIDERATIONS AND HEURISTIC VALUE

Researching in an ethical manner is just as important as choosing the correct methods and methodologies to undertake the research project according to Fleming and Zegwaard (2018). The reason ethics are so important in the conducting of research is that, it potentially affects all the people and institutions associated with this study (stakeholders) (Louw, 2014). Therefore, ethical considerations that were relevant and applicable to this study were as follows - receiving consent from participants and academic body to conduct the research, - keeping in mind the physical and psychological comfort of individual participants, - controlling of emotions by the researcher when participants disclose sensitive information and protecting that information, - not using incentives as a way to entice individuals to partake in the study, - avoidance of any type of harm, both physically and psychologically, - providing participants with anonymity or confidentiality if requested to do so and understanding the difference, - avoidance of the distortion of results, - keeping in mind the researcher's own biases and clearly stating them, - using the collected information from participants for what it is intended and not misusing the data, - ensuring that the research methods employed are appropriate, - providing participants with the rights to withdraw, - self-awareness by the researcher in regards to the various roles he plays during the qualitative research process, - and lastly ensuring that the study strives to further the common good, as indicated by Maree (2020) and Louw (2014).

The limitations which the researcher of this study had to deal with, was limited time and a small sample size. Furthermore, unforeseen events also affected this study, such as the current COVID-19 pandemic that in part affected the researcher's access to the bank customers (participants) in the Pretoria East and Centurion regions. The availability of previous literature on this topic or parts thereof, also limited the study, especially if it takes extra time to find credible information. This then increased the impact that the limited time had on this study. Access to the initial target group showed itself to be a problem, which led to this research report having to change its target group. This meant that the focus of the report had to change. The access limitation was as a result of bank policies that did not allow the researcher to question the target group that was identified first.

The time constraint has been somewhat be addressed by choosing research methods and methodologies that is applicable in a limited amount of time. For the small sample size, the choice of research method and methodology did also help to lessen the impact thereof. For this study the researcher would have attempted to conduct the interviews by making use of online video calls, with the help of software such as Zoom or Skype if it showed to be necessary during the current pandemic. There is not much the researcher was able to do about the limited amount of information available. The researcher of this study compiled different types of literature and their relevant themes that relate to individual parts of the research problem and then combined the relevant data which supported one another.

This study used participants of South Africa, which is a third world country and tried to determine the experience they have with a phenomenon (technology) that is prominent in first world countries to a much greater extent than in a third world country. The study also applied said phenomenon to a certain context, banking.

Even though insightful data was gathered, the point of data saturation has most likely not been reached given the small sample size used. Reason being that, only three participants were used in the study and Guest, Bunce and Johnson (2006, cited in Fusch & Ness, 2015) argue that data saturation cannot be reached with less than six participants, minimum. Nonetheless, insightful themes did arise during the study which might add to the knowledge and understanding of the customers' experience with digital banking.

10. CONCLUSION

It is clear that businesses and more specifically banks, do not have much of a choice but to accept the continuous advancement of technology and that their survival depends on how they react to phenomena as well as the accuracy of the actions taken. This was stated by various studies consulted during this study, as well as the most of the data gathered from participants of this study. This accuracy will determine the success of banking customers accepting and using new technologies and satisfactorily so.

Even though the route being taken is becoming increasingly autonomous and digitalised, there is still a great need for human labour to form part of the equation. By human labour, the researcher is referring to in-person contact points between customers and the banks, in a reasonable amount of instances. This observation was made through the study of the various previously done literature along with the observations and interpretations of the collected data, gathered from participants of this report. It is safe to assume, considering the discussions made in the study and the literature used that and the participant data analysed that, for the most part there is a positive disposition towards digitalised banking.

It also seems, looking at all the data and discussions around this topic that both banks and businesses in general as well as customers are pushing each other to embrace and adopt new technologies. It seems to be a continuous circle, for now at least. Lastly, the interconnectedness of the themes discussed during this paper is unavoidable and should be taken into account. These themes feed into one another.
The data collected from participants were found to be fairly incoherent, when considering how intertwined the various themes of this study seem to be. The reason for this is that, the same participants would give different answers for topics/themes that are very close or include similar factors. This could be an indication of the possibly large number of variables that may play role in the experience that people have with digital banking. This in a way would make sense considering that the focus of this study was essentially the convergence of two different phenomena (customer experience and technology). More support for this was the situational circumstances that arose from the data collected for this report. Lastly another suggestion for possible future research is to determine which factor(s) has the biggest impact on customers' digital banking experience.

It has been determined also that, when it comes to the success of banking technology adoption by the banks that, considering the discussions made in this report, they should pay great attention to customer experience with different technologies implemented as wells as the factors contributing to said experience. This is important as this seems to be a big influential factor along with certain themes that add to it. For the banks to benefit from the technology the adoption thereof needs to be successful.

Future research on this topic may want to consider the large amount of variable factors that seem to have come to the fore during the collection of participant data. Technology awareness also seems to play a role in the success of various instances of interaction between customers and banking technology. This is most definitely also a topic to focus on in future research as well as the professions of people when your target group is the public with no other conditions.

Considering the fact that the research question was addressed as well as the fact that new useable data was collected is motivation that the study was a success. The exploration of the chosen phenomenon was successful seeing that more information regarding said phenomenon was gathered. Both the perception and experience of customers were explored successfully.

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APPENDIX A - Concept Document Template

PROVISIONAL TITLE: Investigation of Customers' Experience with and Perception of Banking Technology

Research Purpose/ Objective	Primary Research Question	Research Rationale	Seminal Authors/ Sources	Literature Review - Conceptual Framework	Paradigm	Approach	Data Collection Method(s)	Ethics	Anticipated Findings	References
The purpose of this study is to explore the perception and experiences that people/ customers of banks in the Pretoria East and Centurion areas have with banking technology.	What significance does experience of customers with banking technology/ digital banking have?	There is a lack of under-standing of the mechanisms used to integrate technology in businesses. Managers are responsible for the successful integration.	Robert K. Yin; Winston M. Tellis; Eric K. Clemons Shariq Mohammed; Wayne F Cascio; Ramiro Montealegre;	**Theme 1:** Banking Technology **Theme 2:** Customer Experience **Theme 3:** Organisational Development	Paradigm Interpretivist Epistemology Use it as data to better understand the topic and purpose of this study. Ontology Reality is created by human interaction and is therefore subjective and fluid. Axiology The research should be unique and cover enough variables related to the topic to get the best possible understanding.	Qualitative approach Population Bank customers in Pretoria East and Centurion.	Semi-structured interviews. Recorded on a mobile phone.	Falsification of information Distortion of results Bias Misuse of information Inappropriate research methods Consent Sensitive information Incentives Avoiding harm Confidentiality and anonymity Deceitfulness	The role of customer experience on the successful adoption of banking technologies. Other possible variables adding to the experience of customers when using digital banking.	See Reference list.
Research Problem	**Secondary Questions/ Hypotheses/ Objectives**	**Key Concepts**	**Key Theories**			**Sampling**	**Data Analysis Method(s)**	**Limitations**	**Anticipated Contribution**	
With the advancement of banking technology, even though there is increased opportunity/potential for improving customer experience it also introduces more complexity in regards to improving customer experience. It thus important to determine there are so few digitally oriented bank customers, even though digital banking keeps advancing.	What is customers' experience with banking technology/digital banking?	Banking Technology Customer Experience Organisational development	Resourced based theory			Non-probability Sampling Method Size 3 Respondents	Unit of Analysis Bank customers' experience and banking technology Data Analysis Method(s)? Thematic Analyses	Bias Time Limited data Covid-19 pan-demic Sample size Bank policies prohibiting the questioning of managers, leading to a change focus group and thus a new topic.	Contribute to research already done about digital banking and customer experience.	

APPENDIX B - Interview Schedule

1. What is your opinion of the advancement of banking technology?
2. Do you trust that your money is safe and secure at your bank with the advances in banking technology?
3. Do you find the various methods of banking digitally (e-banking) easy to use?
    - If so, why?
    - If not, why not?
4. Do you prefer digital banking over traditional banking?
    - If so, why?
    - If not, why not?
5. Would you mind if banking went completely digital (meaning that there will not be any points of human interaction)?
    - If so, why?
    - If not, why not?
6. Do you feel like you benefit from using banking technology (cost savings etc).
7. Are you aware of the efforts your bank makes to keep your finances and personal information secure?
8. Do you find the assistance from your bank through the use of different technologies satisfactory (telephone, real time chat etc.)?
    - If so, why?
    - If not, why not?
9. Do you expect your bank to have the latest and most advanced technologies available in the banking industry for customer interaction?
    - If so, why?
    - If not, why not?
10. Are you comfortable using technology when working with your finances?
    - If so, why?
    - If not, why not?
11. Do you find it easy to adapt to new technologies that your bank implements for customer interaction?

    If so, why?

    If not, why not?
12. Do you feel that your bank caters to all levels of technological literacy?
    - Why or why not?

APPENDIX C - Honours Ethics Checklist

THE INDEPENDENT INSTITUTE OF EDUCATION
IIE

HONOURS RESE, RESM and RMET ETHICS CHECKLIST

Dear student

Please complete this checklist and include this in your proposals as an appendix:

Student name: Rynhardt Prinsloo

Title of the research: Investigation of Customers' Experience with and Perception of Banking Technology

	Yes	No	Comment: Supervisor
Are you using **human subjects** in your research?	✓		
I intend to use human subjects • I understand that I will not conduct research with human subjects under the age of 18 and other vulnerable groups. • I understand I can only proceed once I receive an ethical clearance letter.			
Interviews/ Focus groups An example of the *written consent form* I intend to use is attached. *(Part 5)*	✓		
I will **record** the interview/focus groups and the sample of the letter where I ask for permission to do so is attached. *(Part 7)*	✓		
I plan to use an interview schedule: The example of my research instrument is attached.	✓		
I plan to use a questionnaire: The example of my research instrument is attached.	✓		
I plan to use a gate-keepers letter: The example of my letter is attached. *(Part 3)*	✓		
I plan to do research on an IIE site/with IIE students/staff/artefacts and I filled in the application for permission to do so. The application is attached. I understand I can only proceed once I receive IIE Approval for this. *(Annexure E)*		✓	

Signed: student ....

APPENDIX D – Ethical Clearance

THE INDEPENDENT INSTITUTE OF EDUCATION

13 July 2020

Student name: Rynhardt Prinsloo

Student number: 16000774

Campus: IIE Varsity College Pretoria

Re: Approval of honours in management Proposal and Ethics Clearance

HONOURS/PGDIP ETHICAL CLEARANCE LETTER

Your research proposal and the ethical implications of your proposed research topic were reviewed by your supervisor and the campus research panel, a subcommittee of The Independent Institute of Education's Research and Postgraduate Studies Committee.

Your research proposal posed no significant ethical concerns and your supporting documents and instruments are in order to proceed. We hereby provide you with permission to proceed with your research.

In the event of you deciding to change your research methodology in any way, kindly consult your supervisor to ensure all ethical considerations are adhered to and pose no risk to any participant or party involved. A revised ethical clearance letter will be issued.

We wish you all the best with your research!

GENERAL CONDITIONS TO BE FULFILLED IN RELATION TO RESEARCH

Permission is granted to proceed with the above study subject to the conditions listed below being met and may be withdrawn should any of these conditions be flouted.

Please note: The panel has not considered the merits, accuracy or ethical soundness of the research. The only merits examined are the use of The IIE as a sample.

Permission is granted subject to the following conditions:

1. The researcher(s) will need to obtain informed consent in writing from

all of the participants in his/ her sample if the study is not anonymous.

2. The researcher(s) may only use the data collected for research purposes and in no other way.
3. Photographs of human subjects may only be taken if relevant to the research, informed consent was obtained, and even with informed consent, the photographs may not be published on any online platforms.
4. The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones andshould not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.
5. No names or identifying information of participants may be used within the research and the research must be voluntary.
6. Please make it clear that the information will not be used punitively in any way and participants may in no way be counselled/advised based on this.

Supervisor:
Ruan Van den Berg

Campus Postgraduate Coordinator (CPC):

Janus Snyders

Appendix E – Consent Forms

THE INDEPENDENT INSTITUTE OF EDUCATION

CONSENT FORM TEMPLATE

Explanatory information sheet and consent form for participants
To whom it may concern, My name is Rynhardt Prinsloo and I am a student at Varsity College. I am currently conducting research under the supervision of Dr. Ruan Van den Berg about customers perception and experience with banking technology. I hope that this research will enhance our understanding bank customers' perception and experience with banking technology in the Pretoria East and Centurion areas of Gauteng, South Africa. I would like to invite you to participate in my study. In order to explain to you what your participation in my study will involve, I have formulated questions that I will try to fully answer so that you can make an informed decision about whether or not to participate. If you have any additional questions that you feel are not addressed or explained in this information sheet, please do not hesitate to ask me for more information. Once you have read and understood all the information contained in this sheet and are willing to participate, please complete and sign the consent form below.
What will I be doing if I participate in your study?
I would like to invite you to participate in this research because being a bank customer therefore means that you form part of the subject of this research report. If you decide to participate in this research, I would like to explain exactly what participation will involve. • You will have to complete and sign a personal consent form and a consent form for the audio recording of the interview; • These forms will be sent via email after the first meeting between you and me, which will be to ask for your permission in-person, and so that we can exchange information for possible further arrangements; • I will contact you to arrange a meeting for the interview at whatever time may be most convenient for you; • You will be interviewed; • The interview will be recorded; • I (the interviewer) will make notes during the interview. You can decide whether or not to participate in this research. If you decide to participate, you can choose to withdraw at any time or to decide not to answer particular interview questions.
Are there any risks/ or discomforts involved in participating in this study?
Whether or not you decide to participate in this research, there will be no negative impact

on you. There are no direct risks or benefits to you if you participate in this study. You might, however, indirectly find that it is helpful to talk about your interactions with technology as part of your daily work functions. If you find at any stage that you are not comfortable with the line of questioning, you may withdraw or refrain from participating.

Do I have to participate in the study?

- Your inclusion in this study is completely voluntary;
- If you do not wish to participate in this study, you have every right not to do so;
- Even if you agree to participate in this study, you may withdraw at any time without having to provide an explanation for your decision.

Will my identity be protected?

I promise to protect your identity. I will not use your name in any research summaries to come out of this research and I will also make sure that any other details are disguised so that nobody will be able to identify you. I would like to ask your permission to record the interviews, but only my supervisor, I and possibly a professional transcriber (who will sign a confidentiality agreement) will have access to these recordings. Nobody else, including anybody at Varsity College, will have access to your interview information. I would like to use quotes when I discuss the findings of the research, but I will not use any recognisable information in these quotes that can be linked to you.

What will happen to the information that participants provide?

Once I have finished all interviews, I will write summaries to be included in my research report, which is a requirement to complete my Bachelor of Commerce Honours in Management. You may ask me to send you a summary of the research if you are interested in the final outcome of the study.

What happens if I have more questions about the study?

Please feel free to contact me or my supervisor should you have any questions or concerns about this research, or if there is anything you need to know before you decide whether or not to participate.

You should not agree to participate unless you are completely comfortable with the procedures followed.

My contact details are as follows:
Rynhardt Prinsloo

The contact details of my supervisor are as follows:
Ruan Van den Berg

Consent form for participants	
I, [redacted], agree to participate in the research conducted by Rynhardt Prinsloo about customers perception and experience with banking technology in the Pretoria East and Centurion of Gauteng, South Africa. This research has been explained to me and I understand what participation in this research will involve. I understand that:	
• I agree to be interviewed for this research.	
• My confidentiality will be ensured. My name and personal details will be kept private.	
• My participation in this research is voluntary and I have the right to withdraw from the research at any time. There will be no repercussions should I choose to withdraw from the research.	
• I may choose not to answer any of the questions that are asked during the research interview.	
• I may be quoted directly when the research is published, but my identity will be protected.	
Signature: [redacted]	**Date:** 23/10/2020

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CONSENT FORM FOR AUDIO OR VIDEO RECORDING

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• My confidentiality will be ensured. My name and personal details will be kept private.	
• The recordings will be stored in a password-protected file on the researcher's computer.	
• Only the researcher, the researcher's supervisor and possibly a transcriber (who will sign a confidentiality agreement) will have access to these recordings.	
Signature: [redacted]	**Date:**23/10/2020

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[redacted]	23-10-202
Signature	Date

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[redacted]	23-10-2020
Signature	Date