

An Empirical Investigation into the Digital Integration that Transformed the Health Care Industry at Discovery

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DECLARATION

I Kallen Browne declare that

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(ii) Any secondary research material that has been used throughout this dissertation is peer reviewed and has either been a print source or from the Internet. All sources that have been referenced and accessed for this work have been acknowledged and accurately referenced according to the Harvard referencing technique. The date, author and page number have been cited for the in-text references and a thorough reference list of all authors mentioned and cited in the work has been included at the end of the dissertation. This includes all written, verbal, digital, audio, visual, audio-visual and other sources. Images, tables and figures have also been referenced adequately in the text as well as in the reference list.

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ABSTRACT

This research study assessed the degree to which the digital integration at Discovery Limited impacted their health care sector. The research particularly focused on the correlation of these two factors within the health care sector.

Currently there is very little literature on the relationship between digital integration and the health care sector. As digital technologies continue to grow, the gap in literature should be address. If there is a positive relationship and correlation determined it could change the way the health care sector operates.

This study will assist in filling this gap by determining the relationship on a small scale within one organisation.

In conclusion, by understanding and gaining insights into the digital integration in the health care sector, and importance for more digital integration and innovation can be placed onto the health care sector in South Africa. Discovery Limited can also leverage this relationship to build their brand and customer base.

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LIST OF FIGURES

Figure 1: How the Marketing Funnel Works From Top to Bottom -----	9
Figure 2: Consumer Journey Model -----	10
Figure 3: The New Consumer Decision Journey -----	11
Figure 4: Digital Transformation -----	12

TABLE OF CONTENTS

DECLARATION	----- Error! Bookmark not defined.
ABSTRACT	----- Error! Bookmark not defined.
ACKNOWLEDGEMENTS	----- Error! Bookmark not defined.
LIST OF FIGURES	-----IV
CHAPTER 1 – INTRODUCTION AND OVERVIEW	-----1
1.1 INTRODUCTION	-----1
1.2 CONTEXTUALISATION	-----1
1.3 RATIONALE	-----2
1.4 PROBLEM STATEMENT	-----3
1.5 PURPOSE STATEMENT	-----3
1.6 RESEARCH QUESTIONS	-----3
1.7 HYPOTHESIS	-----3
1.8 SUMMARY	-----3
CHAPTER 2 – LITERATURE REVIEW	-----5
2.1 INTRODUCTION	-----5
2.2 CONCEPTUALISATION OF KEY TERMS	-----5
2.3 THEORETICAL FOUNDATION	-----6
2.3.1 THE MODERNISATION THEORY	-----6
2.3.2 THE HEALTH BELIEF MODEL	-----7
2.3.3 TRADITIONAL MARKETING FUNNEL	-----8
2.3.4 DIGITISATION FRAMEWORK	----- 12
2.4 LITERATURE PERTINENT TO OBJECTIVES	----- 13
2.4.1 RESEARCH OBJECTIVE 1 - TO IDENTIFY WHAT ADVANCEMENTS HAVE BEEN MADE IN THE SYSTEMS USED AT DISCOVERY HEALTH AND HOW ARE THEY HAVE BEEN BENEFICIAL	----- 13
2.4.1.1 ARTICLE 1: DIGITAL HEALTH INNOVATION ECOSYSTEMS	----- 13
2.4.1.2 ARTICLE 2: ICT IN HEALTHCARE	----- 13
2.4.2 RESEARCH OBJECTIVE 2 – TO DETERMINE HOW THE DIGITAL INTEGRATION HAS IMPROVED HEALTHCARE PROCESSES AND SERVICES AT DISCOVERY HEALTH	----- 14
2.4.2.1 ARTICLE 3: DISCOVERY HEALTH PARTNERS APPOINTS HEALTH PAYER TECHNOLOGY VETERAN TO CIO ROLE	----- 14

2.4.2.2 ARTICLE 4: CLINICAL INTEGRATION OF DIGITAL SOLUTIONS IN HEALTH CARE -----	15
2.4.3 RESEARCH OBJECTIVE 3 – TO ESTABLISH IF THE DIGITAL INTEGRATION HAD AN EFFECT ON HEALTHCARE CLAIMS AT DISCOVERY-15	
2.4.3.1 ARTICLE 5: SCIENTIFIC EVALUATION AND REVIEW OF CLAIMES IN HEALTH CARE (SEaRCH): A STREAMLINED, SYSTEMATIC, PHASED APPROACH FOR DETERMINING ‘WHAT WORKS’ IN HEALTHCARE -----	15
2.4.3.2 ARTICLE 6: DIGITAL HEALTH: THE FUTURE OF HEALTHCARE -----	16
2.4 SUMMARY -----	16
CHAPTER 3 – RESEARCH METHODOLOGY-----	18
3.1 INTRODUCTION -----	18
3.2 RESEARCH DESIGN -----	18
3.2.1 RESEARCH PARADIGM -----	18
3.2.2 RESEARCH STRATEGY -----	18
3.2.3 RESEARCH APPROACH -----	19
3.3 RESEARCH PLAN-----	19
3.3.1 POPULATION -----	19
3.3.2 SAMPLING -----	20
3.4 DATA COLLECTION METHODS -----	21
3.4.1 INTERVIEWS -----	21
3.4.1.1 IN-DEPTH INTERVIEWS -----	22
3.4.1.2 INTERVIEW QUESTIONS -----	22
3.4.1.3 RECORDING AN INTERVIEW -----	22
3.4.2 ONLINE SURVEYS -----	22
3.5 DATA ANALYSIS METHODS -----	23
3.5.1 DATA STORAGE AND DISPOSAL -----	24
3.6 VALIDITY AND RELIABILITY -----	24
3.7 TRUSTWORTHINESS -----	25
3.8 ANTICIPATED CONTRIBUTION -----	25
3.9 SUMMARY -----	25
CHAPTER 4 - RESEARCH FINDINGS-----	27
4.1 INTRODUCTION -----	27
4.2 METHODOLOGY APPLIED-----	27

4.2.1 INTERVIEW	27
4.2.2 ONLINE SURVEY	27
4.3 PRESENTATION AND DISCUSSION OF FINDINGS	28
4.3.1 INTERVIEW	28
4.3.2 ONLINE SURVEY	34
4.4 DISCUSSION OF FINDINGS.....	41
4.5 SUMMARY	41
 CHAPTER 5 - CONCLUSIONS AND RECOMMENDATIONS	42
5.1 INTRODUCTION	42
5.2 RESEARCH QUESTIONS	42
5.3 FINDINGS AND RECOMMENDATIONS.....	42
5.4 IMPLICATIONS OF FINDINGS.....	43
5.5 ETHICAL CONSIDERATIONS	43
5.6 LIMITATIONS	44
5.7 DELIMITATIONS	44
5.8 SUMMARY	44
 REFERENCE LIST.....	46
 APPENDICES	
APPENDIX 1: FINAL RESEARCH REPORT DOCUMENT	I
APPENDIX 2: QUESTIONNAIRE MATRIX	II
APPENDIX 3: INTERVIEW GUIDE	III
APPENDIX 4: PARTICIPANT CONSENT FORMS	IV
APPENDIX 5: GATEKEEPERS LETTER.....	V
APPENDIX 6: ETHICAL CLEARANCE	VI
APPENDIX 7: ORIGINALITY REPORT	VIIError! Bookmark not defined.

CHAPTER 1 – INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

In the past decade the integration of digital technologies within organisations has been on the rise. Digital integration is defined as the process of data or information on an electronic device that is read or manipulated by another device using a standard format (Wilson, 2019). The 'electronic devices' referred to, are regularly improved on with new technologies. The term 'new technology' refers to the advances in technological systems and processes which often leads to the invention of new services and products.

When looking at digital integration within organisations it is discussed in terms of how the electronic devices are used to simplify or speed up systems and processes within an organisation. It is how an organisation makes use of technology to improve their service or product offering. With the rise of digital technologies, digital integration also includes the way organisations incorporate new technologies such as smart phones, applications and smart software into their service or product offerings.

This study assesses the relationship between the digital integration at Discovery Limited and its systems and processes as well as the affect on Discovery Health Clients. It examined and evaluated the impact of new technologies with the Discovery Limited and the clients of the corporation.

The field of study that was explored in this dissertation contains components relating specifically to digital marketing and digital implementation both on the front and back in of the organisation.

1.2 CONTEXTUALISATION

Medical insurance companies are often a subject in controversial topics of debate. Key players in this industry such as Discovery Limited need to ensure that their health care operations and services deliver on promises made by the company in order to remain competitive. This also means the company needs to stay ahead of times in

terms of technology and new developments. Technology is advancing at rapid rates which could be seen as a treat to global businesses (Morrison, 2017). To ensure technology is not going to act as a threat to a business, businesses are rather using technological advances to their advantage to improve their offerings.

Discovery Health Medical Scheme are amongst some of the first organisations to make use of digital integrations. As technology advances, Discovery advances alongside it. The debate would be, has the digital integration in Discovery Health been beneficial to the organisation? By analysing the technological advances that have been made in the organisation, as well as the affect of these on its processes, systems, and services, we can draw a conclusion to the question stated above. By answering this question and putting the debate to rest, it can benefit Discovery Health in terms of its organisation and their health care sectors' public relations, marketing and branding efforts.

1.3 RATIONALE

How did this topic become one that interested me? In 2017, I was in my second year of my Bachelors Degree in Digital Marketing when I job shadowed at Discovery. While there I could immediately see how new technology had transformed the organisation in terms of their marketing efforts as well as the organisations overall and products and services they provide. This sparked an interest for the organisation. With this interest for the organisation and my qualification in digital marketing, this topic will help me understand the organisation in more depth and help me grow in my field.

Why is this research worth conducting? In 2018, Discovery was ranked the 22nd largest organisation in South Africa (Businesstech, 2018). While discovery has been ranked among the top 25 companies in South Africa (Businesstech, 2018), there are claims that Discovery often scams their clients (Health24, 2016). I believe my research can benefit Discovery Holdings as a brand by enforcing positive brand image and creating brand exposure. This positive brand image and exposure can enforce Discovery's shared value model: "Our shared value insurance model delivers better health and value for clients, superior actuarial dynamics for the insurer, and a healthier society," (Discovery, 2019).

1.4 PROBLEM STATEMENT

The health care industry is continuously looking for new ways to improve their processes and services in order to remain competitive. Integrating new technology into this industry could lead to improved systems and more efficient processes which could result in an improved health care sector within the business, Discovery Limited.

1.5 PURPOSE STATEMENT

To determine a positive correlation between the digital integration within Discovery Limited and their health care sector.

1.6 RESEARCH QUESTIONS

In order to assess the effect of a digital integration at Discovery Health the following questions are answered in this study:

1. What advancements can be identified in the systems used at Discovery Health and how are they beneficial?
2. To what extent has the digital integration improved health care processes and services at Discovery Health?
3. Has the digital integration had an effect on health care claims at Discovery?

1.7 HYPOTHESIS

As Discovery Health Medical Scheme incorporates digital technologies into their systems, processes, and services there is a positive affect on their health care sector.

1.8 SUMMARY

This study brings insight on how Discovery Limited has adopted new technology and how it has changed and impacted their systems and processes within the organisation. Discovery Limited is a well-known organisation with a strong brand essence attached to it and to many people it is considered ahead of the game in terms of the degree of digital integration compared to their competitors. Discovery Limited needs to leverage and continue this perception to grow their presence in the market place.

Through this study the relationship between the digital integration and the systems and processes at Discovery Health will be determined as well as how it has had an impact on their clients. This study would also provide clarity to the assumption that Discovery Limited is making use of new technology to positively impact the organisation as well as their clients. This study can amplify to which extent that the organisation will go through to provide the best offerings for their clients.

Chapter 2 presents the literature review and theoretical framework that assisted the study. This was done through models and theories relative to the study.

CHAPTER 2 – LITERATURE REVIEW

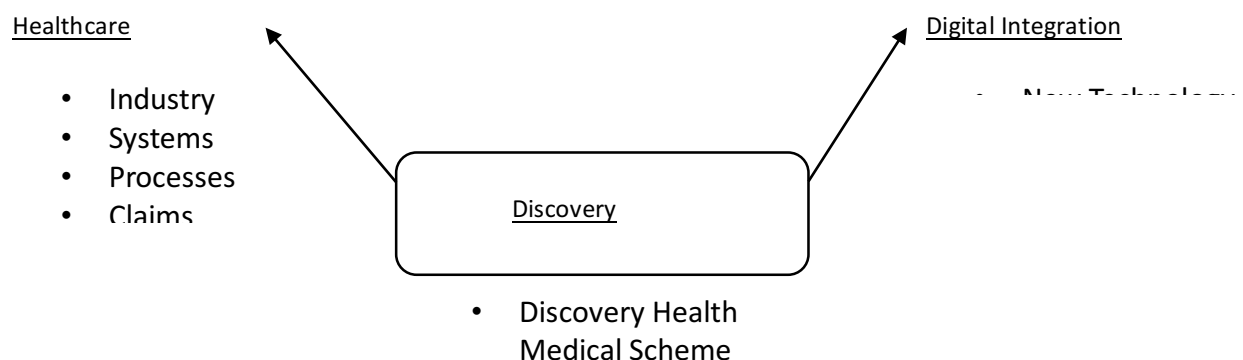
2.1 INTRODUCTION

This chapter will unpack the conceptual and theoretical frameworks relating to the digitalisation of marketing efforts and impact on industries. The focus of the research has been steered towards the health care industry and relates to the research questions of this study. The purpose of a literature review is to gather current literature, unpack information relating to the topic and discover relevant material that can enhance the research (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014).

Research has shown that over the past two decades' digitalisation has changed business (Coleman, 2019). The digital evolution has touched every industry (Coleman, 2019). In an industry, such as healthcare, there is a continuous need to improve services and processes in order to remain current and competitive. Improved services and processes could have a positive influence on the health care sector.

The reference of two theories are examined in this study: The Modernisation Theory and The Health Belief Model Theory. Additionally, two frameworks have been used to explore the study further, these being: The Traditional Marketing Funnel and Digitisation Framework. Conceptual clarification of terms pertinent to the study will also be discussed.

2.2 CONCEPTUALISATION OF KEY TERMS



Discovery – “A shared value insurance company whose purpose and ambition are achieved through a pioneering business model that incentivises people to be healthier, and enhances and protects their lives,” (Discovery, 2019).

Discovery Health Medical Scheme – “A registered open medical scheme which any member of the public can join, subject to the Scheme's rules,” (Discovery, 2019).

Digital Integration – “The idea that data or information on any given electronic device can be read or manipulated by another device using a standard format,” (Wilson, 2019).

New – “Produced, introduced, or discovered recently or now for the first time; not existing before,” (Oxford Dictionaries | English, 2019).

Technology – “Methods, systems, and devices which are the result of scientific knowledge being used for practical purposes,” (Collinsdictionary, 2019).

Healthcare – “Efforts made to maintain or restore physical, mental, or emotional well-being especially by trained and licensed professionals,” (Merriam-webster, 2019).

Industry – “Any general business activity or commercial enterprise that can be isolated from others,” (BusinessDictionary, 2019).

System (Plural: Systems) – “A set of things working together as parts of a mechanism or an interconnecting network; a complex whole,” (Oxford Dictionaries | English, 2019).

Process (Plural: Processes) – “A series of actions or steps taken in order to achieve a particular end,” (Oxford Dictionaries | English, 2019).

2.3 THEORETICAL FOUNDATION

2.3.1 THE MODERNISATION THEORY

The Modernisation Theory explains “the changing ways of communication and media use in traditional and (post)modern societies,” (Universiteit Twente, 2019). This theory emerged in the 1950s to explain the development of societies (Crossman, 2019). The modernisation theory explains the development of society as a uniform evolutionary route (Sciencedirect, 2015).

Once a society has engaged in the modernisation process, it follows the below sequence (Sciencedirect, 2015):

1. Traditional Economy
2. Transition to Take Off
3. Take Off
4. Drive to Maturity
5. Age of High Consumption
6. Post Industrial Society

An external influence in modernisation is science (Sciencedirect, 2015). Science is considered beneficial to developing countries by way of knowledge and technology transfer from developed countries (Sciencedirect, 2015). This means that modernisation is often fast tracked by science and technology (Sciencedirect, 2015). Technology can be referred to as a catalyst for development (Sciencedirect, 2015). Technology is said to be critical for national competitiveness (Sciencedirect, 2015).

I chose this theory to support my research as it acknowledges that development can depended primarily on technology (Crossman, 2019). The modernisation theory has had to evolve due to the developments of technology. Technology has become a key factor that can not be ignored when looking at modernisation. An advantage to the modernisation theory in terms of my research, is that it can provide a framework for understanding and analysing the relationship of the variables being studied. These variables being digital integration and the healthcare industry in South Africa will be discussed further in the upcoming literature.

2.3.2 THE HEALTH BELIEF MODEL THEORY

The Health Belief Model (HBM) is “a psychological model that attempts to explain and predict health behaviours,” (Universiteit Twente, 2019). This model focuses on the individual’s attitudes and beliefs as a way of predicting health behaviours (Universiteit Twente, 2019). There are three core assumptions made in this model (Universiteit Twente, 2019). The model is centred around the understanding that an individual will take a health related action if that individual (Universiteit Twente, 2019):

- a) Feels that a negative health condition can be avoided (Universiteit Twente, 2019),
- b) has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (Universiteit Twente, 2019), and
- c) believes that he/she can successfully take a recommended health action (Universiteit Twente, 2019).

The HBM can support my research by drawing connections between the digital integration at Discovery and health behaviours of Discovery clients. The HBM can disseminate a person's beliefs into four categories (Hahm, 2012):

1. Perceived Susceptibility
2. Perceived Severity
3. Perceived Benefits
4. Perceived Barriers

The HBM is often used in cases of mental illness or physical health problems but can be adapted and used to understand consumer's health behaviours and additionally, their reaction to the digital integration into health care services.

2.3.3 TRADITIONAL MARKETING FUNNEL

The traditional marketing funnel shows the process of turning leads into customers from a marketing perspective (TrackMaven, 2019). The stages are represented as a funnel to show the reality of how leads turn into customers (TrackMaven, 2019). The stages are Awareness, Interest, Consideration, Intent, Evaluation and Purchase (TrackMaven, 2019). Over the years, as marketing evolves and changes, the traditional marketing funnel has been challenged. The basic principle is still relevant but as the customer decision journey changes so will the relative marketing efforts.

The Traditional Marketing Funnel

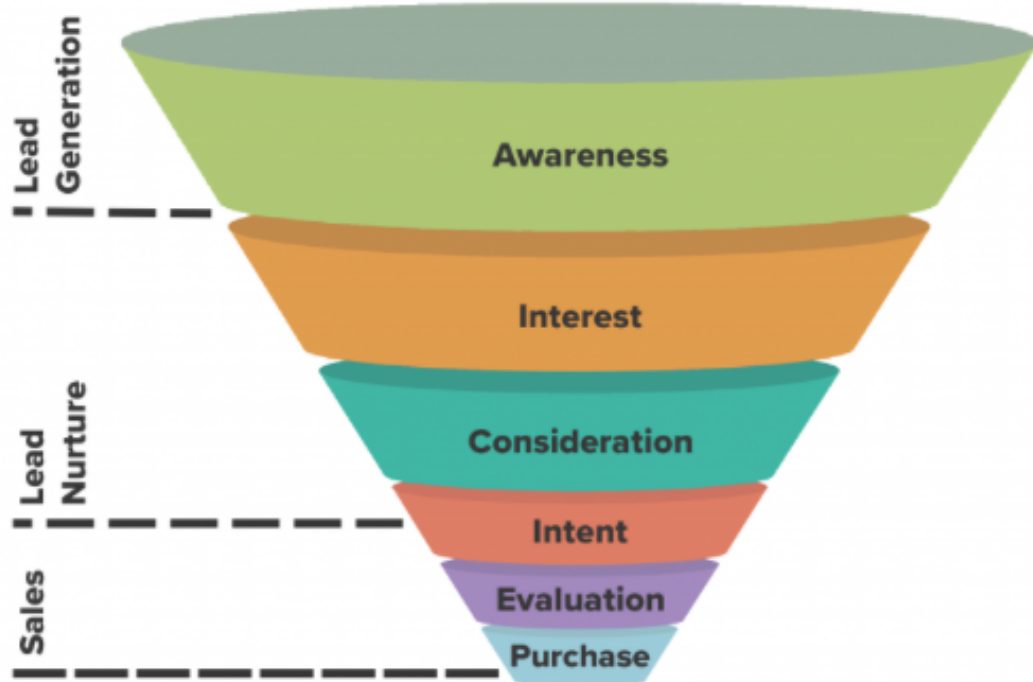


Figure 1: TrackMaven | The Marketing Insights Company. 2019. How the Marketing Funnel Works From Top to Bottom. [Image]. Available at: <https://trackmaven.com/blog/marketing-funnel-2/> [Accessed 29 May 2019].

An alternative to the marketing funnel is McKinsey's Consumer Decision Journey model (TrackMaven, 2019). This is a circular model that highlights the process and touch points in the buying process (TrackMaven, 2019).

McKinsey's Consumer Journey Model

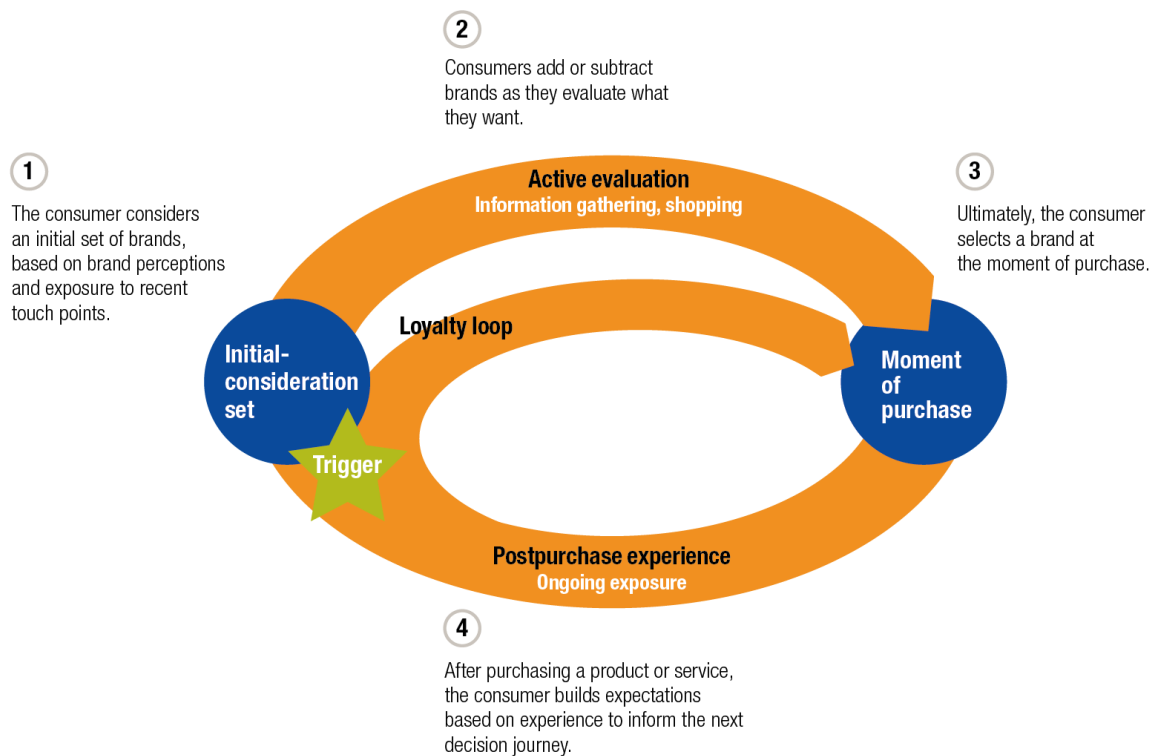


Figure 2: TrackMaven | The Marketing Insights Company. 2019. How the Marketing Funnel Works From Top to Bottom. [Image]. Available at: <https://trackmaven.com/blog/marketing-funnel-2/> [Accessed 29 May 2019].

Technological advances have given consumers more power in their buying process (Edelman and Singer, 2015). This led to McKinsey's model being updated to fit the consumer journey accounting for the rise in technology. The new model allows companies to continuously optimize decision journeys (Edelman and Singer, 2015). The new model aimed to allow companies to use journeys to deliver value to both the customer and the brand (Edelman and Singer, 2015).

Comparison of Mckinsey's Old and New Models

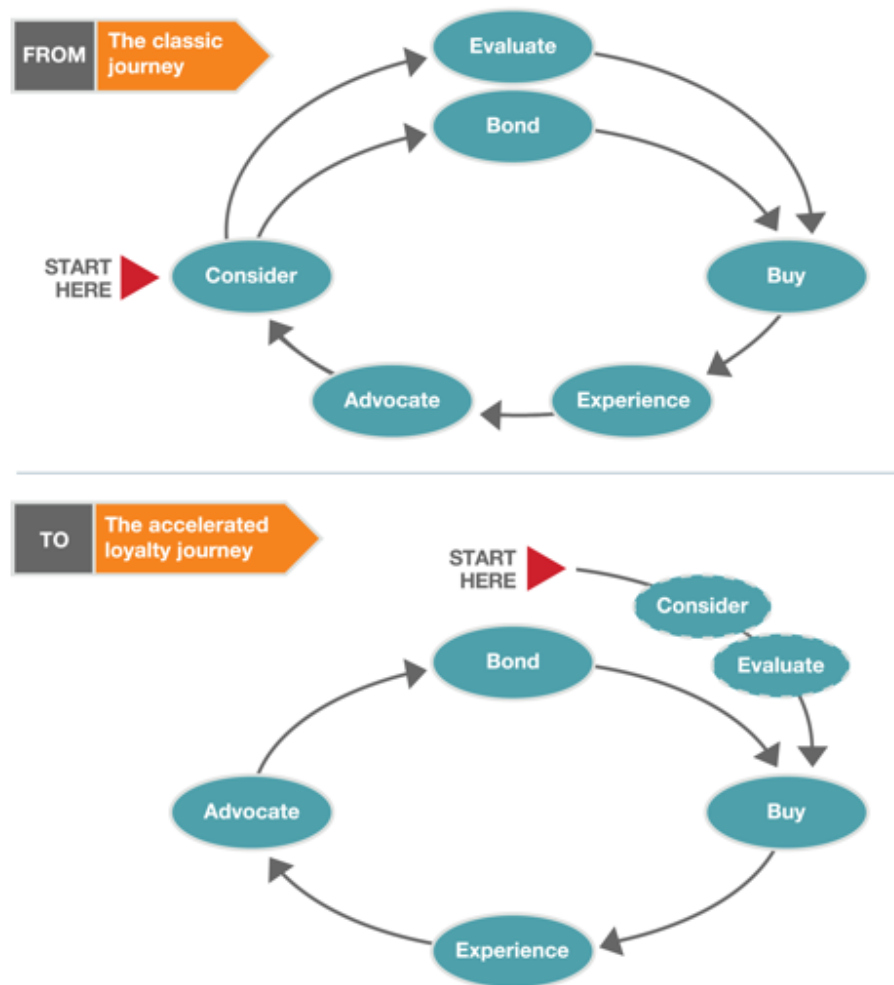


Figure 3: Edelman, D. and Singer, M. 2015. *The new consumer decision journey*. [Online]. McKinsey & Company. Available at: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-new-consumer-decision-journey> [Accessed 29 May 2019].

Understanding the above three models will guide the research in terms of how technology has had an affect on traditional marketing efforts and digital marketing efforts. The movement from traditional to digital can also be referred to as digitalisation. The models will also guide the research in understanding client behaviours in the healthcare industry.

2.3.4 DIGITISATION FRAMEWORK

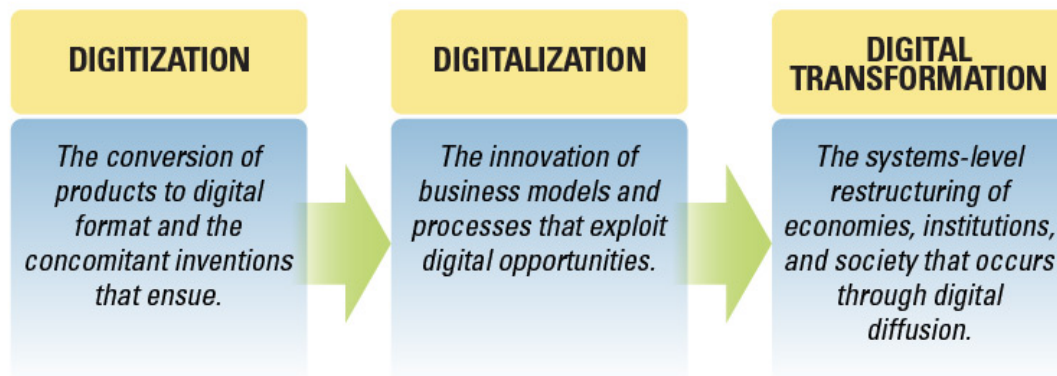


Figure 4: Unruh, G. and Kiron, D. 2017. *Digital Transformation on Purpose*. [Image]. MIT Sloan Management Review. Available at: <https://sloanreview.mit.edu/article/digital-transformation-on-purpose/> [Accessed 29 May 2019].

Digitalisation is a key component of this particular research topic. The digitisation framework can help in understanding the digital revolution and assist organisations in creating an improved digital future (Unruh and Kiron, 2017). With the digital world being one that is relatively new and always changing, it is important we understand the different terms and how they work interchangeably.

The import phase in this framework, in relation to the study, is digitalisation. Digitalisation involves the innovation and development of new business models and processes (Unruh and Kiron, 2017). Digitalisation is disruptive in nature and can be a source of competitive advantage (Unruh and Kiron, 2017). Discovery Health has used digitalisation in order to keep their systems and processes competitive. Discovery Health's business model can be looked at in terms of the digitalisation framework. The business model is now one that is reliant on technology and digitization.

The terms from this framework will be referred to in the literature of this research as well as guide and set a tone for the research.

2.4 LITERATURE PERTINENT TO OBJECTIVES

2.4.1 RESEARCH OBJECTIVE 1 – TO IDENTIFY WHAT ADVANCEMENTS HAVE BEEN MADE IN THE SYSTEMS USED AT DISCOVERY HEALTH AND HOW ARE THEY HAVE BEEN BENEFICIAL.

2.4.1.1 ARTICLE 1: DIGITAL HEALTH INNOVATION ECOSYSTEMS

This article reviews the existing literature on digital innovation ecosystems with the aim of exploring various terms and components as to present a framework (Iyawa, Herselman and Botha, 2016). In this article, digital health is used as an example of healthcare innovation. This is because it provides a platform for which digital technologies facilitate patients' participation in the healthcare processes (Iyawa, Herselman and Botha, 2016). It is noted in this study that academic literature thus far rarely discusses the term 'digital health innovation ecosystem' and has not yet been clearly defined (Iyawa, Herselman and Botha, 2016).

This paper defines the terms digital health, innovation and digital ecosystems and the explores the components of these terms in order to build a defined framework, thus contributing to the emerging body of literature on digital innovation ecosystems (Iyawa, Herselman and Botha, 2016). The definition of these terms as well as the framework will be used to continue the contribution to existing literature and therefore this research will adopt a systematic review approach. This is important in identifying what advancements have been made to healthcare systems.

2.4.1.2 ARTICLE 2: ICT IN HEALTHCARE

This article argues the increasing advances in technology and the awareness of digital technology in healthcare. The article touches on how people are becoming more accepting to receiving healthcare through the digital medium (Kumar, Pareek and Jain, 2018). The article emphasizes that governments are dedicating huge budgets towards e-health systems.

An important theme that comes out in this article is the need for Information and Communication Technology (ICT). ICT's use technology to collect data, process

results and provide analysis and results (Kumar, Pareek and Jain, 2018). The article classifies four areas for ICTs in healthcare, those being; education, application software, research, and data management (Kumar, Pareek and Jain, 2018).

ICT's play a huge role in the digitalisation of Discovery Health and their systems used. ICT's are also responsible for how the systems and processes at Discovery operate. This article will also support the research in terms of the increasing importance of using technology in health care services and processes.

2.4.2 RESEARCH OBJECTIVE 2 – TO DETERMINE HOW THE DIGITAL INTEGRATION HAS IMPROVED HEALTHCARE PROCESSES AND SERVICES AT DISCOVERY HEALTH.

There is a huge volume of articles that showcase how the use of technology has transformed various components and areas of the healthcare industry. From these articles it is pertinent that the use of technology and digitalisation is improving the healthcare industry overall. For this objective, the research was aimed at uncovering the processes and services at Discovery Health.

2.4.2.1 ARTICLE 3: DISCOVERY HEALTH PARTNERS APPOINTS HEALTH PAYER TECHNOLOGY VETERAN TO CIO ROLE

This article is based on the appointment of Dan Iantorno as Chief Information Officer for Discovery Health. In the article, Iantorno (PR Newswire, 2019) says how he will bring forward his business-driven IT approach to Discovery. The article goes on to explain how Discovery will reach a new level of technology solutions that will meet more needs of their clients and deliver more value to Discovery clients.

This article presents the idea that Discovery Health has already implemented IT infrastructure and platforms and is still looking for ways to keep IT operations included and make use of new technologies to remain competitive. The article touches on the mission of Discovery Health, which is to “deliver unique, actionable analytic insights and technology-powered solutions to help healthcare payers improve payment integrity, increase revenue optimisation, and maximise efficiencies with government programs,” (PR Newswire, 2019).

2.4.2.2 ARTICLE 4: CLINICAL INTEGRATION OF DIGITAL SOLUTIONS IN HEALTH CARE

This article points out that digital health includes both the software and hardware technology included in healthcare delivery and management (Garg, 2018). This article focuses on the current integration of digital health technology in cancer care. Although this does not directly associate with all healthcare claims, this article can still assist in analysing how a digital integration has impacted the healthcare industry.

This article states how devices, trackers, sensors, remote monitoring, electronic surveys, electronic patient reports, telemedicine, artificial intelligence, and digital assistance have emerged due to a digital integration in this industry (Garg, 2018).

The article also states that the digital integration has assisted new methods of data collection and information flow (Garg, 2018). The implementation of new technology can also reduce costs, workflow inefficiencies, and improve overall health care value, patient outcomes and patient quality of life (Garg, 2018).

2.4.3 RESEARCH OBJECTIVE 3 – TO ESTABLISH IF THE DIGITAL INTEGRATION HAD AN EFFECT ON HEALTHCARE CLAIMS AT DISCOVERY.

2.4.3.1 ARTICLE 5: SCIENTIFIC EVALUATION AND REVIEW OF CLAIMS IN HEALTH CARE (SEARCH): A STREAMLINED, SYSTEMATIC, PHASED APPROACH FOR DETERMINING 'WHAT WORKS' IN HEALTHCARE.

This article assists in understanding the correlation between digital integration and healthcare claims. SEaRCH is a Scientific Evaluation and Review of Claims in Health Care (Jonas, 2017). The process provides a way of making evidence based decisions about healthcare claims in research and practice (Jonas, 2017). It is a protocol-driven process that can be customized in terms of intervention, consumer, and context (Jonas, 2017).

This article provides an organised framework for the healthcare industry. The framework can assist in determining which healthcare practices are to be used to improve the public's health and wellness (Jonas, 2017). The SEaRCH framework can be used in the discussion around the effect of digital integration on healthcare claims.

2.4.3.2 ARTICLE 6: DIGITAL HEALTH: THE FUTURE OF HEALTHCARE

In this article digital health technologies are summed up and analysed. The article states that there has been a 'flood' of digital health technologies over the past few years, with a focus on mobile health tools (Mešanović, 2018). The article explains the two-way communication between the health care provider and the patient due to these mobile health tools. The article explains how digital integration will lead to the healthcare industry moving from traditional hospital or office based visits to technology based interactions (Mešanović, 2018). These interactions would be virtual, on-demand, and patient-centred (Mešanović, 2018).

In this article it agrees with the statement in article 5 that the integration of digital health tools has the power to improve patient outcomes and reduce costs in healthcare (Mešanović, 2018).

This article sums up the context of the research in terms of digital integration and where healthcare is heading in the future. There is a gap in the literature of Discovery Health as a healthcare provider as well as digital integration in healthcare as a whole.

2.5 SUMMARY

The literature review has gone in depth into key terms and theories within this study. The key terms being, digitisation, digitalisation, and digital integration. The two key theories being The Modernisation Theory, The Health Belief Model Theory, and two key frameworks being the Traditional Marketing Funnel and the Digitisation Frameworks. These key terms, theories, and frameworks have provided context to the digital integration of Discovery Health.

- Research Objective 1 explored the advancements that have been made in the systems used at Discovery Health and how they have been beneficial. Articles on digital advancements in healthcare as a whole were considered to get context on what general advancements have been made to healthcare systems.
- Research Objective 2 looked into how the digital integration has improved healthcare processes and services at Discovery Health. Research was done on the current and future plans for Discovery in terms of technology

advancements regarding their processes and services. Digital solutions in healthcare was also assessed.

- Research Objective 3 looked into the relationship between digital integration and health care claims as well as what the future of healthcare looks like.

Due to there not being a lot of literature on Discovery Health, the research focused on healthcare as a whole and has been adapted to remain relevant to the study.

After analysing these objectives in the literature investigated, it can be said that the healthcare industry has changed dramatically as more digital integration occurs. It can also be noted that there are plans to continue making use of digital integration to improve healthcare services and providers.

CHAPTER 3 – RESEARCH METHODOLOGY

3.1 INTRODUCTION

The research methodology provides a road map to the research that will take place. It outlines what the research needs to achieve and how it will be achieved. The methodology is made up of the research design and research plan. The purpose of this chapter is to justify the chosen methodology and expand on it. The chapter also explores the research approach, research strategy and the data collection methods.

3.2 RESEARCH DESIGN

3.2.1 SELECTED PARADIGM

Interpretivism is “to understand and describe meaningful social actions and experiences,” (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). With the aim of research in mind, a correlation between the variables and an understanding of the variables will result in a description of the relationship that exists. Therefore, the research tradition is Interpretivist Theorising. The researcher will be immersed in the research in an empathetic and subjective manner (Maree, K, 2016) and the respondents’ internal and subjective experiences are the ones under examination (Maree, K, 2016).

3.2.2 RESEARCH STRATEGY

The research will take on a qualitative method of study. Qualitative data collection assists researchers to obtain richness and depth of data collection, gathered from complex and multi-faceted phenomena in a specific social context (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014).

When looking at the research tradition interpretivism, it can be explored in the context of its epistemology, ontology and axiology. The epistemological position is when something is seen as knowledge when it feels right to those being studied (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). Common sense is an important source of knowledge (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014), in this research common knowledge of increased digital integration is important in terms of the

interpretivist. In terms of the ontological position, the research is assisting social construction. When looking at the axiological position in the interpretivist research tradition uniqueness is valued (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). The research can improve organisations, such as Discovery Health Medical Scheme.

3.2.3 RESEARCH APPROACH

The aim of the research is to explain why integrating digital into an organisation such as Discovery Health Medical Scheme can affect systems, processes, and services. More than identifying this relationship between variables mentioned, the investigation will identify the degrees to which these relationships exist (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). Therefore, the research is explanatory. Explanatory research clarifies the how and why to a relationship that exists (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). By defining the relationship, a cause-and-effect relationship between the variables can be indicated, (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). The qualitative research methods used are experimental designs (quasi-experimental) and non-experimental designs (correlational studies) (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014).

3.3 RESEARCH PLAN

3.3.1 POPULATION

A population is defined as the total group of people from whom information is required from (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014).

Unit of Analysis: An organisation, namely Discovery Holdings.

Population Parameters

- Nature of the population: Stakeholders of Discovery Health Medical Scheme.
- Size of the population: All the employees and clients with Discovery Health Medical Scheme.
- Unique characteristics of the population: The employees and clients must currently be employed by, or insured by, Discovery Health Medical Scheme.

Population of study

- Target Population: Current Discovery Health Medical Scheme employees and members.
- Accessible Population: Employees at Discovery Limited Sandton and Discovery Health Medical Scheme members in Durban, KwaZulu-Natal.

The respondents of this study that were interviewed met the profile of the target population. The aim was to gain insight from the target population that was pertinent to the study, which meant both employees of the organisation as well as clients of the organisation were to be targeted. The aim when interviewing employees at Discovery Limited was to gain insight into the systems and processes, that make use of new technologies, in the back end of the organisation. The aim when targeting current Discovery Health Medical Scheme members was to gain insight to the perceptions of the organisations digital aspects.

3.3.2 SAMPLING

Non-probability sampling was used for the research conducted as it is impossible to determine the entire population (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). This study made use of two types of sampling methods. The first methods were volunteer sampling for the interview of the Discovery Limited employees. The second method was convenience sampling and was used when conducting an online survey targeted to current Discovery Health Medical Scheme members, thus Discovery Limited clients. The four benefits of convenience sampling were that it can be done at a lower cost, it can bring about greater accuracy of results, it can improve the speed at which data is collected and there is an availability of population elements (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014).

The sample design reflected the nature as well as the purpose for the study and research conducted. For this study, the importance of the type of qualitative research was to represent the population in order to form a construct, meaning that sample size was not of importance (Maree, 2016).

A pilot study was conducted to ensure that the questions asked in the interview as well as on the online survey were fully understood by the interviewees and respondents. This also ensures that there were no issues regarding the wording or understanding.

- Interview Sample Size: 3 Females at Discovery Limited employees.
- Online Survey Sample Size: 20 respondents, made up of 7 males and 13 females. The respondents ranged from ages 18 to 65.

3.4 DATA COLLECTION METHODS

This study made use of two main methods to gain insights from the research. The qualitative methods of data collection used were in-depth interviews and surveys.

The first phase provided a foundation of understanding behind the systems and processes that are in place at Discovery Limited. This involved three in-depth interviews at the Discovery Limited offices in Sandton. The ideal candidates for these interviews were employees that were involved in the technical side of the systems and processes behind the organisations digital integrations and platforms. These candidates were also ones who could comment on the journey of integrating digital technologies into the organisation. This also provided a deeper understanding of the digital integration that had taken place over the past ten years and how it impacting their clients.

The second phase involved the use of an online survey. The online survey provided an understanding on the assumptions of current Discovery Health clients and the organisations digital integration. The online survey link was shared on Facebook, where current Discovery Health Medical Scheme members over the age of 18 were asked to complete the survey.

3.4.1 INTERVIEWS

Interviews were used in this study as a way of effectively gaining insight and information on the systems and processes within Discovery Limited. The interviews proved effective as this information is only known to those working with and on the systems and processes within the organisation.

One on one in-depth interviews were used to formulate a deeper understanding on the focused topics of discussion (MBA Skool-Study.Learn.Share., 2019).

3.4.1.1 IN-DEPTH INTERVIEWS

The interviews followed a qualitative nature in order to gain a deeper understanding of the systems and processes within the organisation. An interview guide was drawn up to guide the interview in the correct direction. The interview was semi-structured in order to modify the questions appropriately for the employee being interviewed. The interview was recorder in order to give the interviewee full attention while not missing out on any key information. The recorded interviews were then listened to and notes were made on the interviews.

3.4.1.2 INTERVIEW QUESTIONS

The research for this particular study was conducted using an Interpretivist approach and therefore the interviews were qualitative in nature. The interview questions were open-ended and semi-structured in order to leave room for gaining more information on how the systems and processes within the organisation operate. The interview questions focused on the overall process of integrating digital into the organisation and the impact of this digital integration on the systems and processes. The concluding questions probed answers relating the digital integration to the clients at Discovery Health.

3.4.1.3 RECORDING AN INTERVIEW

When conducting the interview, it was necessary to record the interview with consent from the interviewee. An audio-recorder was used during the entire interview to ensure no information was lost. This allowed the researcher to pay full attention to the interviewee and the stimulated conversation and then go back after the interview and make notes.

3.4.2 ONLINE SURVEY

A survey means the researcher is “inspecting something carefully,” (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). This method is useful when gathering information on

a large group such as clients of a large organisation. The online survey was used as a part of this study as a way of getting the consumers insight and opinion on the topic of study. The online survey proved to be effective in understanding how the digital integration within the organisation has impacted the clients at Discovery Health. It also revealed what systems and processes have become more or less effective due to the digital integration, from the clients' perspective.

The online survey used the following types of questions:

- Closed-ended questions containing a certain amount of answers to select from.
- Open-ended questions invited the respondents to answer in their own words and as in-depth as they were willing to go.
- Matrix questions, which are scaled questions, to allow the respondents to select the option the best reflected their opinion on the matter.

(Du Plooy-Cilliers, Davis and Bezuidenhout, 2014)

3.5 DATA ANALYSIS METHODS

Thematic analysis is the data analysis method that is most commonly used when conducting qualitative research. Thematic analysis puts emphasis on the pinpointing, examining and recording of patterns or themes within data findings (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). In terms of qualitative research, thematic analysis provides a systematic structure to the review and analysis process of your research findings (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

According to Zhang and Wildemuth, 2019, the process of qualitative data analysis follows the below steps (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014):

1. Prepare the data.
2. Define the coding unit to be analysed.
3. Develop categories and a coding scheme or conceptual framework.
4. Test your coding scheme on a sample text.
5. Code all text.
6. Assess your coding consistency.
7. Draw conclusions from the coded data.
8. Report your methods and findings.

The selective coding, or theoretical coding, was used in the coding process. This allowed for the core or essential codes to be revealed from the research (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). This meant that the codes corresponded with the code that most adequately described with central notion for this study (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). The core concepts were then used as a guiding principle in selecting related concepts and collecting new data (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

The last step in analysis was proving or disproving the hypothesis. This is a common form of analysis in qualitative research as it allows the relationship to be established between the variables. The data collection method was used to draw conclusions from that would then support or disprove the hypothesis of the study.

3.5.1 DATA STORAGE AND DISPOSAL

All of the data that was collected during the duration of this study was compiled, scanned in electronically and stored on a secure external drive. This external drive was password encrypted. All original hard copies of research data have been stored in a secure location. In five years from the data on publishing, all the data from this study will be destroyed.

3.6 VALIDITY AND RELIABILITY

Validity is used to describe whether the research measures what it was supposed to measure (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). A question we can ask ourselves is 'Do the findings reflect what is happening in the given situation?' (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). Below are the types and forms of validity that will be used during this research (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014):

- Sampling validity: Is the test representative?
- Construct Validity: Does it measure what is is meant to?
- Criterion-related Validity: Does the test accurately predict future behaviour?

Internal and external validity will both be used to ensure the research is accurate and can be trusted.

3.7 TRUSTWORTHINESS

Trustworthiness is used in qualitative studies to further interrogate the validity of research. When examining the trustworthiness of the research credibility, transferability, dependability and confirmability are assessed. Credibility is the accuracy of the data that will be provided by the participants (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). Transferability is the ability for the findings to be applied to a similar situation and deliver the same results (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). Dependability is the quality of the process of integration between the data collection method, data analysis and the theory generated (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014). Confirmability is how well the data collected will support the findings and interpretation of the researcher (Du Plooy-Cilliers, Davis and Bezuidenhout, 2014).

3.8 ANTICIPATED CONTRIBUTION

I believe the research that will take place and the findings that will be generated will call for further research with the organisation. The findings and observations that will be gained from this research can benefit the organisation by adding to their knowledge base. Furthermore, the research can be used to support public relations, marketing and branding efforts. The findings and observations gained from this research could be utilized to build PR, Marketing, or Branding campaigns and has the potential to grow the brand and organisation as a whole. The research will also enforce a positive image for Discovery Health Medical Scheme and Discovery Limited as an organisation.

3.9 SUMMARY

Chapter 3 discussed the data collection, analysis and the findings of the study. The research paradigm was examined when adopting the research approach of a qualitative study and thus qualitative methods of data collection and analysis. The data collection plan examined how the use of qualitative methods impacted the research process. The data analysis that was undertaken throughout the study was explained in order to provide an understanding of how the researcher engaged with and used the data. The validity, reliability and trustworthiness of the study and the researcher were explained in detail. Finally, the anticipated contribution of the researcher was

considered and explained in detail. Chapter 4 discusses the research findings as well as provides an analysis of the findings in relation the the research questions and methodology of the study.

CHAPTER 4 – RESEARCH FINDINGS

4.1 INTRODUCTION

In this chapter the data that was collected from the in-depth interviews and the online survey are presented. All the data has been presented in a way that makes it clear and easy to interpret and understand. All the results are discussed in order to generate a deep and meaningful understanding of the findings. The analysis of the data was conducted according to the research methodology that was discussed in Chapter 3. It is important to state that this was a small-scale qualitative study. Therefore, the findings and recommendations would require a large scale quantitative study to support the hypothesis of this study. This qualitative study proved a relationship between the variables and produced valuable insight into the digital integration at Discovery Limited.

4.2 METHODOLOGY APPLIED

4.2.1 INTERVIEW

The research plan was to reach employees at the Discovery Limited offices in Sandton that had a deep understanding of the digital integration within the organisation as well as how it has impacted the systems and process used within the organisation. Through a contact at the Discovery Limited offices in Sandton, three interviews were set up. The three interviewees were all female. The respondents' identities have been used during analysis as they all gave consent to their identities not being kept anonymous. The interviews were audio recorded with consent from the interviewees as well. Volunteer sampling was used for this method of study.

4.2.2 ONLINE SURVEY

A total of 20 respondents completed the online survey via the online survey tool, Google Forms. Seven respondents were male and thirteen were female. The ages of the respondents ranged from 18 to 65. The online survey consisted of 11 questions. The online survey was posted to Facebook. All respondents completed the entire survey. The data was evaluated and exported as a spreadsheet. Convenience

sampling was used for this method of study. All respondents' identities were anonymous for the purpose of this study.

4.3 PRESENTATION AND DISCUSSION OF FINDINGS

4.3.1 INTERVIEW

Question 1 - *What is your current position at Discovery and how long have you worked for Discovery Health?*

- Senior business analysis, about a 1 year and 3 months.
- Senior business architect, 11 years.
- Deputy general manager in strategic risk and fraud risk, 21 years.

Question 2 – Have you been a witness to the digital integration within Discovery Limited?

With two of the interviewees having over ten year's experience working at Discovery Limited, it was very clear that they would have seen the digital integration take place in the organisation. All three of the interviewees had a grin as they agreed to witnessing this digital integration. It can be deduced that it is almost given that when working at Discovery Limited, you will be witness to digital integration.

One interviewee commented on the current project she is involved in, that is focused on integrating the various digital aspects of the business. This project includes connecting all the digital assets the organisation is currently making use of and building the digital assets. This specific digital integration is for the purpose of driving efficiency of the digital assets the organisation has acquire as well as understanding how to better use the digital channels to facilitate and enable care for members and clients.

Question 3 – What are you overall thoughts on the digital integration?

The three interviewees mentioned that Discovery Limited is integrating digital well but can still improve on many aspects. One interviewee mentioned that she believes Discovery Limited is one of the leaders of digital integration within their sector.

The Discovery Vitality space was mentioned by two of the interviewees in terms of where digital is being integrated the most. The Discovery Vitality Application was said to be getting their members more engaged in heath and fitness. It was also mentioned that the digital integration was improving the services that members are receiving but that they still have a far way to go in terms of improving systems and processes that are still done manually.

There was one comment that brought up the issue of having various target markets and that digital integration is not always a top priority for some of these markets, and that the organisation needs to keep this top of mind.

Question 4 – *Do you think Discovery make use of/integrates more digital technologies compared to their competitors?*

All three interviewees agreed to Discovery Limited being ahead of the game in terms of their digital technologies. One interviewee went on to say she does not believe there is a comparable health insurance product currently out there.

“I think we do, we are very proactive in our release strategy and launch strategy where we are on a constant drive to innovate and that’s a real big digital focus because it’s the easiest way to reach our key target audience through digital channels,” (Gibbs, 2019).

Question 5 – *In your opinion, do you think this integration has changed/ had an impact on the systems at Discovery Health?*

Question 6 – *If so, how?*

Interviewee A believed that digital integration has impacted the back end of claim management the most. It was mentioned that there is a specific focus on improving the back end functionality of client claims.

Interviewee B believed that it has impact the organisation in terms of how they operate. It has moved from operating as silos into an organisation that has become integrated due to installing the digital technologies.

Interviewee C also mentioned that functionality of back end systems and said that it also impacts the complexity of the front end systems to match the complexity of the back end systems, specifically when dealing with tracking and navigating members and clients.

Question 7 – *In your opinion, do you think this integration has changed/ had an impact on the processes at Discovery Health?*

Question 8 – *If so, how?*

All three interviewees agreed that it has impacted the processes within the organisation. The main impact commented on was the efficiencies of the processes due to the digital integration. Due to digital automation of processes, a huge amount of time is being saved. The processes are also more user friendly for both employees and members. It was still mentioned that there is more integration that can take place.

Question 9 – *Do you think there is any negative impact on Discovery's digital integration in terms of South Africa being behind in technology compared to other countries?*

Interviewee A believed that data costs in South Africa are negatively affecting the organisations digital integration. It was mentioned how their application means that the user needs a smartphone and data but not all target markets have these available. She went on to say that Discovery is searching for ways to enable technology even where it may have been seen inaccessible in the past.

Interviewee B believes that the constraint in South Africa comes with the legislations in the country. A new technology that the organisation is currently offering members is virtual care consults, but due to legislation it is required that clients have a prior relationship in order to have a consult, which is limiting the function. It is also limiting the reach of patient care it could potentially have.

Interviewee C believes the biggest issue in South Africa that impacts their digital integration is the speed connectivity in the country.

Question 10 – *Do you think that the changes in the systems and processes since the digital integration have had any impact on client claims at Discovery?*

Question 11 – *If so, how?*

Interviewee A agreed that there has been an impact on client claims in the organisation due to the digital integration. She went on to mention that there is an ongoing study

within the organisation that proves the correlation between the members being more engaged and aware of their health and health outcome and lower claims, lower cost of schemes and better health outcomes. She mentioned that the study reveals there is a real correlation between digital integration and lower cost of claims. This study has look at the Vitality program, which is one of the digital tools members use.

Interviewee B believed that they have not reached a level yet where they could say it has directly impacted client claims. She went on to mention that the intention of digital integrations is to enable better solutions and quality of care which would result in a reduction of costs and an increase in the tools available for doctors and patients.

Interviewee C believed that the digital integration has resulted in an increased speed of services and smarter services, which could then impact the speed at which claims are made and the efficiency of dealing with client claims.

Question 12 – *Do you think that this impact has changed the amount of client claims at Discovery?*

The general view from all the interviewees on this question was that it would be very hard to directly compare the digital integrations impact on the amount of client claims as there are too many variables to factor in. For example, the about of members over the years have grown, which would impact the amount of claims.

Question 13 – *In what way has it impacted the amount of client claims?*

The view carried on from the previous question, and it was noted that the process of client claims has become far more efficient. Personalisation was also mentioned.

“We know a lot more about about members, so we see need to safely, securely and intelligently manage that data to provide a better health care experiences and outcomes,” (Werth, 2019).

Question 14 – *Is this a positive or negative impact?*

All three interviewees agreed it was a positive impact for the clients.

Question 15 – *Where do you see Discovery in the next 5 years in terms of their digital integration?*

Interviewee A said that digital technologies are going to continue to enable better care and navigation of care for members and care providers. She also mentioned that technology can facilitate the care of clients and their interaction with care providers. “We will go from being a health insurance company to being a care provider, care coordinator and care enabler,” (Werth, 2019).

Interviewee B said that digital will be enabled more into management of the organisation.

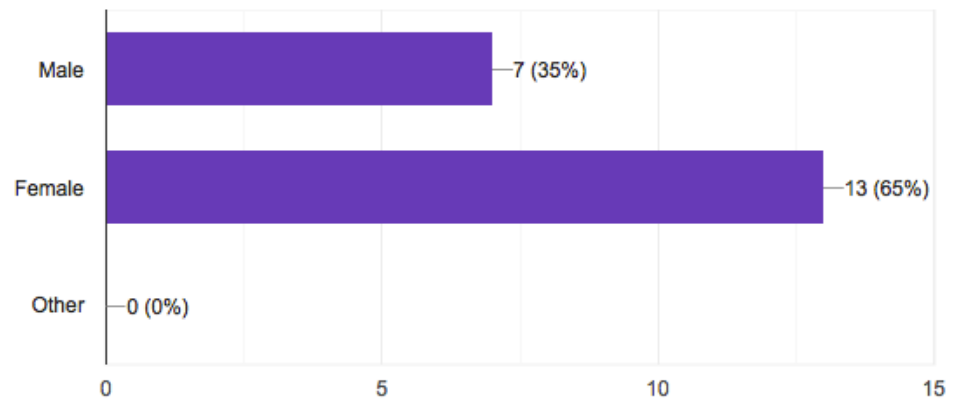
Interviewee C believes that digital will help align the customer journey with the end user and internally the organisation will continue to change their minds to ones where they are digital focused.

4.3.2 ONLINE SURVEY

Question 1 - Gender of respondent

I am...

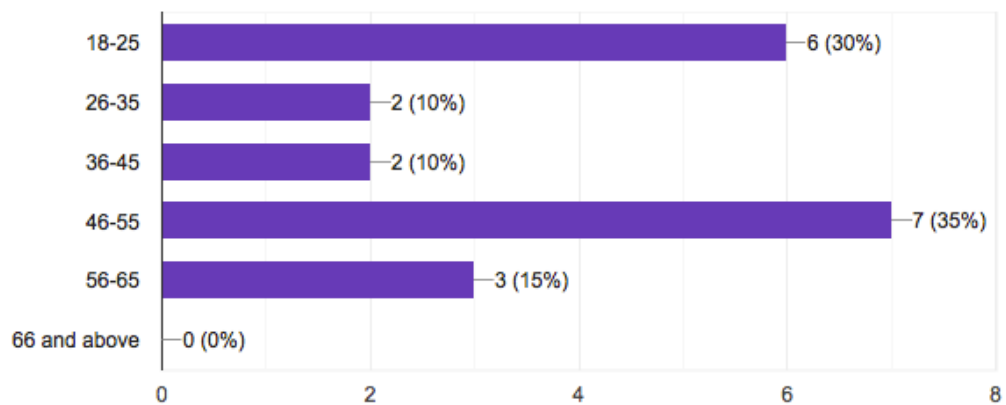
20 responses



Question 2 – Age of respondent

How old are you?

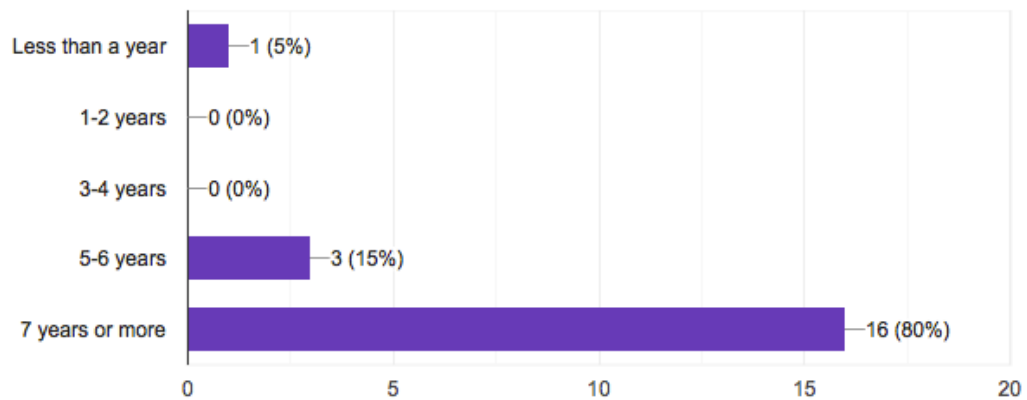
20 responses



Question 3 – Length of membership

How long have you been a member of Discovery Health?

20 responses

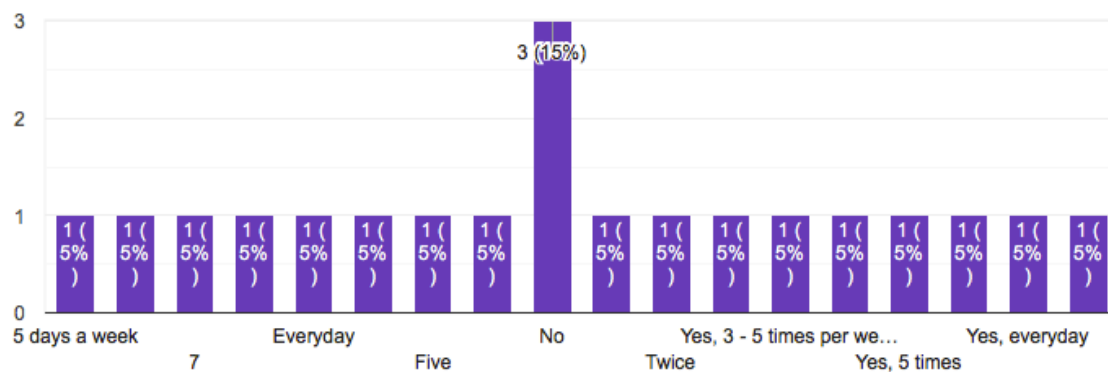


Question 4 – Digital Application use

Do you have the Discovery Health Application on your phone? If so, approximately how often do you use it in a week?



20 responses

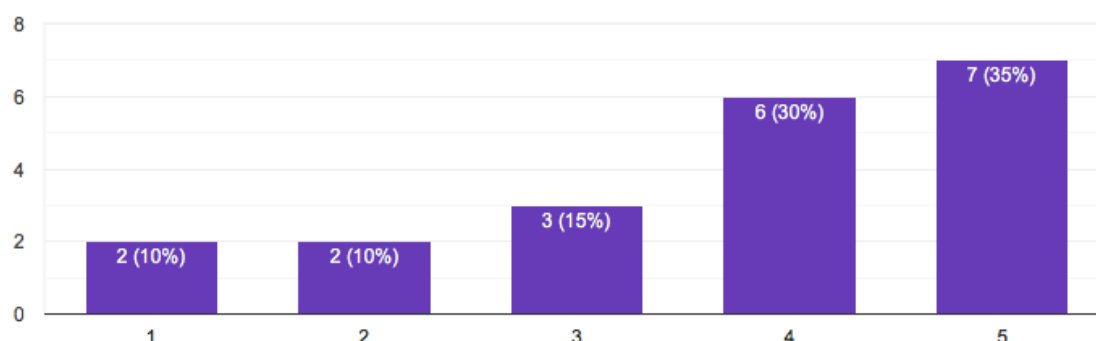


Question 5 – Digital Application thoughts

In your opinion how useful is the Discovery Health application in terms of speeding up the systems and processes related to your health care?



20 responses



Question 6 – Digital Application thoughts

“What are the things you enjoy about the Discovery Health Application and what are the things you dislike about the application?”

The navigation system of trying to find things is a bit difficult. Otherwise the ability to access and do a lot of things on the app is great
Vitality Benefits
Enjoy the rewards. Dislike none
Like - Vitality Rewards, Claims, queries Dislike - the new layout, hard to find the rewards and points which is the thing I use daily
They keep changing it and making it less user friendly.
Tracking vitality points and gym visits
Vitality only
Enjoy rewards. Do not enjoy doing a really hard race and still getting the same points as a 30km ride
It's a little bit trick to navigate. Once you know where everything is, it's very convenient.
I like that it is constantly up to date with my activities etc but I don't enjoy that I have to log in every time I open the app.
Difficult to navigate
Ease of use
N/a
N/A

I like that I can access my information easily and quickly. I dislike that the app sometimes doesn't reward my points to me. The app isn't so efficient in that aspect
I enjoy the points system on vitality. It's annoys me that I often have to re login
Great online application. There is nothing that I dislike.
Don't have it
Tracking vitality points and medical savings balance. No dislikes
I use it to get vitality points and to submit claims

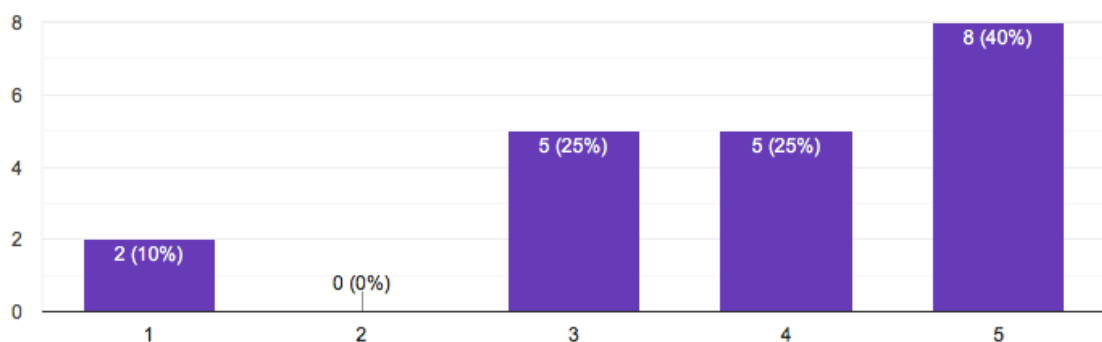
Two respondents said that the question was not applicable to them. We can deduce that this means they do not have or use the Discovery Health Application.

Question 7 – Digital Integration thoughts

In your opinion has the digital integration within the organisation improved the systems and processes at Discovery Health?



20 responses



Question 8 – Digital Integration thoughts

“How do you think the digital integration within the organisation has changed the systems and processes at Discovery Health?”

Yes
Yes
Yes
Made it mobile friendly, can instantly send claims etc from cell phone
I spend less time holding for a person but I spend more time trying to find my way around their app as it keeps changing.
Don't know
Tip of your fingers

Don't know
Sped everything up tremendously.
Voice activation saves validation when calling them. Workouts upload quickly and correctly. Rewards download easily. I am able to access all my documents for insurance and medical instantly etc
Puts my Discovery information at my fingertips across medical and policy information.
Smoother process
More accessible
N/A
I would imagine that everything works more effectively and efficiently except when the app is down or there are technical difficulties
Much more efficient
It's so much easier to do things yourself online without the need to phone anyone or send emails.
No clue
Much more is automated than it used to be eg putting in a claim
It is easier for me to submit claims and access my vitality

Again, two respondents said that the question was not applicable to them.

Question 9 – Digital Integration thoughts

“Do you think Discovery Health makes use of/integrates more digital technologies than their competitors do?”

Most definitely
Yes
Yes
Yes
I have no idea as I belong to Discovery
Yes
Yes
I have heard momentum is very good
Yes, as far as I am aware, Discovery is miles ahead.

Yes and they definitely lead when it comes to ideas
Yes
Not sure
Unsure
N/A
Yes
Yes
Cannot comment as I am not familiar with what their competitors do.
No clue
Don't know
Yes

Question 10 – Digital Integration thoughts

“Does the amount of digital integration at Discovery Health have an impact on your decision to remain as one of their clients? If so, why?”

No
Yes, makes accessing information easier and possible in many locations, whenever necessary.
Yes, it's modern and up to date
Yes, love the Vitality Rewards - iWatch, running shoes, keeps me fit (like having a personal trainer)
No
Yes, makes it easier for consumers to access their personal information
Loyalty
No. I am so locked into discovery I do not have an option to leave
Not really. Discovery has always been my choice, and always will be. The digitisation is just a massive bonus.
Yes I feel comfortable knowing that if I had an emergency the Dr has all my details blood type current medications etc even if I was not able to give details
Ease of use
No
No
N/A

No. I go for the benefits/cost of something, not if they're digitized.
Yes. It's an amazing app that offers benefits that I doubt any of its competitors do
The thought of changing my medical aid has not even crossed my mind.
No
Yes I enjoy knowing where I am with my medical aid
Yes, I have a busy lifestyle and being able to easily access my claims and medical aid information is vital for me

Question 11 – Digital Integration thoughts

“Do you have any closing comments regarding the digital integration at Discovery Health?”

N/a
Overall Discovery Health use of digital technology is smooth, user friendly and very useful.
Digital is the future
It's world class
Please stop making stupid changes just to confuse us !
No
Not at this point
Reward points fairly for harder activities. They said if you obtained more points than required in a year they would be converted to air miles but this has not come into effect
Not at this present time. I'm glad Discovery has gone this way!
I believe that Discovery will always be leaders in their field including their use of digital technology.
N/a
No
No
N/A
N/A
I believe it is something all brands are going to begin to do
Keep up the good work Discovery.
None
The new app is more complicated than the old. Seems a little to involved
No

4.4 DISCUSSION OF FINDINGS

It is clear that there is a relationship found in the research between the digital integration at Discovery Limited and client claims. Due to the scope and limitations of the research the extent of this relationship could not be assessed. From the online survey it can be deduced that the digital integration with clients such as the Discovery mobile application is effective and is a contributor to the relationship being studied.

4.5 SUMMARY

The research provided sufficient insights and findings into the relationship being studied as well as the research questions. The findings from this chapter related to the problem statement and have revealed that there is a clear relationship between the variables being studied. Chapter 5 will summarize the findings and address the research in research to each research question.

CHAPTER 5 – CONCLUSION AND RECOMENDATIONS

5.1 INTRODUCTION

Chapter 5 presents the conclusions and recommendations in relation to each research question. The findings for each research question are in relation to the literature presented in Chapter 2 and from the research conducted in Chapter 4. Suggestions for further research are considered along with the closing statements.

5.2 RESEARCH QUESTIONS

When starting this study, the below research questions were proposed:

1. What advancements can be identified in the systems used at Discovery Health and how are they beneficial?
2. To what extent has the digital integration improved health care processes and services at Discovery Health?
3. Has the digital integration had an effect on health care claims at Discovery?

From Chapter 4, it can be deduced that there are technological advancements being made everyday in the organisation and are far more advance than the systems and processes. The systems in Discovery Limited have become more reliant on digital technologies which has been beneficial to those working within the organisation. The digital integration has improved processes and services of Discovery Health in many ways, with the focus being on the Discovery Vitality Application. This improvement is benefitting the organisation as well as the clients. From the findings it can be deduced that there has been a positive effect on health care claims at Discovery Limited but would require a large scale study to be done in order to understand the extent of the effect. The most relevant effect found during this study was the level of efficiency and effectiveness of health care within the organisation.

5.3 FINDINGS AND RECCOMENDATIONS

From this we can say that the hypothesis of the study, “As Discovery Health Medical Scheme incorporates digital technologies into their systems, processes, and services

there is a positive affect on their health care sector,” has been proven with a positive relationship of the variables.

In order to remain leaders in the market as well as remain competitive in the market, Discovery Limited needs to continue integrating digital technologies into their systems and processes to continue impacting their clients claims positively. Discovery Limited should do this while remain consumer focused and always consider their target audience in relation to the degree of digital integration.

5.4 IMPLICATIONS OF FINDINGS

Due to the positive relationship that has been determined, there are no implications of findings for future practices. This study can be used to support further studies into the relationship of client claims. A quantitative study could be done to assess the relationship in terms of amount of claims and the digital integration but would require real-time data and information from Discovery Limited.

5.5 ETHICAL CONSIDERATIONS

Ethical issues: Participants

- Informed Consent: Client’s medical information might not be sharable or will have to be handled with confidentiality. Employees might only participate if their participation is confidential. Confidentiality must be handled correctly.
- Collecting Data from participants: Participants will need to be informed on how their information will be protected. Participants should not be made to feel embarrassed, or have their time wasted.
- Dealing with sensitive information: During this research, sensitive information could be obtained. This information needs to be handled appropriately and should not be revealed to anyone.
- Confidentiality and anonymity: Participants will be given the choice of anonymity. All information will be kept confidential.
- Employee Bias.

Ethical issues: The Researcher

- Distorting results: Results will not be distorted.
- Bias: As the researcher and a member of Discovery, I will need to be aware of any bias that could affect the research.
- Using inappropriate research methods: All research methods will not be harmful for participants or unsuited to the research.

5.6 LIMITATIONS

The following limitations have been identified in this study:

- Financial resources: There were low financial resources as this study was self-funded.
- Time: Due to the research having specific due dates, there will be a time restraint on the research. This will also limit the amount of information that can be obtained.
- Accessibility to participants: The participants were limited to the Gauteng and KwaZulu-Natal provinces due to time constraints and financial resources.
- Access to information: Accessibility to sensitive information could limit this research. Due to the information including medical information, access to information can be denied.

5.7 DELIMITATIONS

Due to the financial, time and geographical constraints of this study there were areas that were not fully explored in the research. Discovery is a global brand and the nature of the study only considers consumers from Gauteng and KwaZulu-Natal. How the digital integration within Discovery Health has impacted consumers outside in an international context has not been considered in this study due to it being outside of the research scope. This was due to time constraints as well as the limited research resources that would be needed to conduct a global study.

5.8 SUMMARY

This study explored the relationship between the digital integration and client claims. The study aimed to determine whether this was a positive or negative relationship. The study followed an ontological outlook throughout the research, while making use

of qualitative data collection and analysis. Qualitative data included interviews and an online survey. A literature review was conducted to provide an academic background to the study.

It is evident through the findings that there is a positive relationship between the digital integration in the organisation and client claims. Key literature frameworks showed how digitalisation can improve systems and processes within the healthcare industry.

After having drawn a valid conclusion and making appropriate recommendations it is advised that Discovery Limited continue with their large scale study on the relationship between the digital integration in the organisation and the impact on client claims and should continue to do this as technology continues to evolve. This will benefit both the organisation and their clients.

REFERENCE LIST

1. BusinessDictionary.com. 2019. *When was the last time you said this?*. [Online]. Business Dictionary. Available at: <http://www.businessdictionary.com/definition/industry.html> [Accessed 22 Mar. 2019].
2. Businesstech.co.za. 2018. *These are the 25 biggest companies in South Africa*. [Online]. Business Tech. Available at: <https://businesstech.co.za/news/business/233451/these-are-the-25-biggest-companies-in-south-africa/> [Accessed 24 Mar. 2019].
3. Coleman, A. 2019. *How two decades of digitalisation has changed business – and why it shows no sign of stopping*. [Online]. The Guardian. Available at: <https://www.theguardian.com/future-focused-it/2018/dec/13/how-two-decades-of-digitalisation-has-changed-business-and-why-it-shows-no-sign-of-stopping> [Accessed 25 May 2019].
4. Collinsdictionary.com. 2019. *Technology definition and meaning | Collins English Dictionary*. [Online]. Collins Dictionary. Available at: <https://www.collinsdictionary.com/dictionary/english/technology> [Accessed 22 Mar. 2019].
5. Crossman, A. 2019. *What is Modernization Theory?*. [Online]. ThoughtCo. Available at: <https://www.thoughtco.com/modernization-theory-3026419> [Accessed 24 Mar. 2019].
6. Discovery.co.za. 2019. *Medical Aid | Life Insurance | Car Insurance | Vitality*. [Online]. Discovery. Available at: <https://www.discovery.co.za/portal/> [Accessed 22 Mar. 2019].
7. Du Plooy-Cilliers, F., Davis, C. and Bezuidenhout, R. 2014. *Research matters*. 6th ed. Cape Town: Juta & Company Ltd.
8. Edelman, D. and Singer, M. 2015. *The new consumer decision journey*. [Online]. McKinsey & Company. Available at: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-new-consumer-decision-journey> [Accessed 25 May 2019].

9. Facey, K. 2019. As health technology assessment evolves so must its approach to patient involvement. *Journal of Comparative Effectiveness Research*.
10. Garg, S. *et al.* 2018. 'Clinical Integration of Digital Solutions in Health Care: An Overview of the Current Landscape of Digital Technologies in Cancer Care', *JCO Clinical Cancer Informatics*, 2, pp. 1–9. [Accessed: 26 May 2019].
11. Glanz, K., Rimer, B. and Viswanath, K. 2008. *Health Behaviour and Health Education*. 4th ed. [ebook]. San Francisco: Jose-Bass, pp.45-62. Available at: [http://iums.ac.ir/files/hshe-soh/files/%5BKaren_Glanz%2C_Barbara_K._Rimer%2C_K._Viswanath%5D_Heal\(BookFi.org\)\(1\).pdf#page=83](http://iums.ac.ir/files/hshe-soh/files/%5BKaren_Glanz%2C_Barbara_K._Rimer%2C_K._Viswanath%5D_Heal(BookFi.org)(1).pdf#page=83) [Accessed 24 Mar. 2019].
12. Guides.library.ucsc.edu. 2019. *Library Guides: Oral History Research and Resources: About Oral History*. [Online]. Available at: <https://guides.library.ucsc.edu/oralhist> [Accessed 25 Mar. 2019].
13. Hahm, H. 2012. *Failure to Receive Health Care Among People with Mental Illness: Theory and Implications*. [Online]. Available at: https://www.researchgate.net/figure/Health-Belief-Model-Strengths-and-Weaknesses-of-Theoretical-Approaches_tbl2_23555265 [accessed 26 May, 2019]
14. Health24.com. 2016. Revealed: Discovery Health's *top fraudulent medical aid claims*. [Online]. Health24. Available at: <https://www.health24.com/Medical-schemes/News/revealed-discovery-healths-top-fraudulent-medical-aid-claims-20160602> [Accessed 24 Mar. 2019].
15. Iyawa, G., Herselman, M. and Botha, A. 2016. Digital Health Innovation Ecosystems: From Systematic Literature Review to Conceptual Framework. *Procedia Computer Science*, 100, pp.244-252.
16. Jonas, W. B. *et al.* 2017. 'Scientific Evaluation and Review of Claims in Health Care: A Streamlined, Systematic, Phased Approach for Determining "What Works" in Healthcare', *Journal of Alternative & Complementary Medicine*, 23(1), pp. 18–25. [Accessed: 26 May 2019].
17. Kumar, P., Pareek, K. and Jain, V. 2018. *The Stances of e-Government*. CRC Press.

18. Maree, K. 2016. *First steps in research*. 2nd ed. Pretoria: Van Schaik Publishers.
19. MBA Skool-Study.Learn.Share. 2019. *Depth Interview Definition | Marketing Dictionary | MBA Skool-Study.Learn.Share..* [Online]. Available at: <https://www.mbaskool.com/business-concepts/marketing-and-strategy-terms/13314-depth-interview.html> [Accessed 25 Mar. 2019].
20. Merriam-webster.com. 2019. *Definition of HEALTH CARE*. [Online]. Merriam Webster. Available at: <https://www.merriam-webster.com/dictionary/health%20care> [Accessed 22 Mar. 2019].
21. Mešanović, N. and Smajić, E. 2018. 'Digital health: the future of healthcare', *Cardiologia Croatica*, 13(11/12), p. 461 [Accessed: 26 May 2019].
22. Morrison, N. 2017. *Rapid Technological Change Is The Biggest Threat To Global Business*. [Online]. Forbes. Available at: <https://www.forbes.com/sites/nickmorrison/2017/02/09/donald-trump-is-not-the-biggest-threat-to-global-business/#19bf8d4d1b73> [Accessed 2 Aug. 2019].
23. Oxford Dictionaries | English. 2019. *new | Definition of new in English by Oxford Dictionaries*. [Online]. Oxford Dictionary. Available at: <https://en.oxforddictionaries.com/definition/new> [Accessed 22 Mar. 2019].
24. Oxford Dictionaries | English. 2019. *process | Definition of process in English by Oxford Dictionaries*. [Online]. Oxford Dictionary. Available at: <https://en.oxforddictionaries.com/definition/process> [Accessed 22 Mar. 2019].
25. Oxford Dictionaries | English. 2019. *system | Definition of system in English by Oxford Dictionaries*. [Online]. Oxford Dictionary. Available at: <https://en.oxforddictionaries.com/definition/system> [Accessed 22 Mar. 2019].
26. PR Newswire. 2019. 'Discovery Health Partners Appoints Health Payer Technology Veteran to CIO Role', *PR Newswire US*, 7 May. Available at: <http://search.ebscohost.com.ezproxy.iielearn.ac.za/login.aspx?direct=true&db=bwh&AN=201905071200PR.NEWS.USPR.UN42582&site=ehost-live> [Accessed: 26 May 2019].
27. Sciencedirect. 2015. *Modernization Theory - an overview | ScienceDirect Topics*. [Online]. Available at: <https://www.sciencedirect.com/topics/social-sciences/modernization-theory> [Accessed 25 May 2019].

28. TrackMaven | The Marketing Insights Company. 2019. *How the Marketing Funnel Works From Top to Bottom*. [Online]. Available at: <https://trackmaven.com/blog/marketing-funnel-2/> [Accessed 25 May 2019].
29. Universiteit Twente. 2019. *Health Communication | Health Belief Model*. [Online]. Available at: <https://www.utwente.nl/en/bms/communication-theories/sorted-by-cluster/Health-Communication/Health-Belief-Model/> [Accessed 24 Mar. 2019].
30. Universiteit Twente. 2019. *Media, Culture and Society | Modernization Theory*. [Online]. Utwente. Available at: <https://www.utwente.nl/en/bms/communication-theories/sorted-by-cluster/Media-Culture-and-Society/Modernization%20Theory/> [Accessed 24 Mar. 2019].
31. Unruh, G. and Kiron, D. 2017. *Digital Transformation on Purpose*. [Online]. MIT Sloan Management Review. Available at: <https://sloanreview.mit.edu/article/digital-transformation-on-purpose/> [Accessed 25 May 2019].
32. Wilson, D. 2019. *Let's Get Digital - What is Digital Integration?*. [Online]. Lets Get Digital. Available at: <https://www.letsgetdigital.ca/services/digital-integration/what-is-digital-integration> [Accessed 22 Mar. 2019].

APPENDICES

APPENDIX 1: FINAL RESEARCH REPORT DOCUMENT

Research Purpose/ Objective	Primary Research Question	Research Rationale	Seminal Authors/ Sources	Literature Review – Conceptual Framework	Paradigm	Approach	Data Collection Method(s)	Ethics	Anticipated Findings	Recommendation
To determine the relationship between the digital integration at Discovery and health care claims.	Has the digital integration had an effect on health care claims at Discovery?	If there is a relationship between the variables, it can influence the digital component in the organisation in the future. A positive correlation between the variables can be an asset to the organisation.	Syed Ghulam Sarwar Shah D. Jaron Kern SE C. Smith	Traditional Marketing Funnel Digitisation Framework	Paradigm: Interpretivism Epistemology : Increased digital integration. Ontology: Social construction. Axiology Improve organisations.	Quantitative	Surveys, in-depth interviews, oral history.	Medical confidentiality and non-disclosure agreements within the organisation.	A positive correlation between the variables being studied.	Continue large scale study. Prove correlation though quantitative study
						Population				
						Nature of the population: Stakeholders of Discovery Health Medical Scheme. Size of the population: All the employees and clients with Discovery Health Medical Scheme. Unique characteristics of the population: The employees and clients must currently be employed by, or insured by, Discovery Health Medical Scheme.				
Research Problem	Secondary Questions/ Hypotheses/ Objectives	Key Concepts	Key Theories			Sampling	Data Analysis Method(s)	Limitations	Anticipated Contribution	
Finding ways to improve health care insurance.	What advancements can be identified in the systems used at Discovery Health and how are they beneficial? To what extent has the digital integration improved health care processes and services at Discovery Health?	Discovery DHMS Healthcare Industry Systems Processes Claims New technology Digital integration	Modernisation Theory The Health Belief Model			Non-probability. Volunteer (30) and convenience (80) sampling.	Proving or dis-proving the hypothesis. Null hypothesis and alternative hypothesis.	Researcher bias. Employee Bias Limit to organisations information.	I believe it will call for further research with the organisation and benefit the organisation by adding to their knowledge base.	

APPENDIX 2: QUESTIONNAIRE MATRIX

1. I am...

- Male
- Female
- Other

2. How old are you?

- 18-25
- 26-35
- 36-45
- 46-55
- 56-65
- 66 or over

3. How long have you been a member of Discovery Health?

- Less than a year
- 1-2 years
- 3-4 years
- 5-6 years
- 7 years or more

4. Do you have the Discovery Health Application on your phone? If so, approximately how often do you use it in a week?

5. In your opinion how useful is the Discovery Health application in terms of speeding up the systems and processes related to your health care?
(Matrix scale)

6. What are the things you enjoy about the Discovery Health application and what are the things you dislike about the application?

7. In your opinion has the digital integration within the organisation improved the systems and processes at Discovery Health?

8. How do you think the digital integration within the organisation has changed the systems and processes at Discovery Health?

9. Do you think Discovery Health makes use of/integrates more digital technologies than their competitors do?

10. Does the amount of digital integration at Discovery Health have an impact on your decision to remain as one of their clients? If so, why?

11. Do you have any closing comments regarding the digital integration at Discovery Health?

APPENDIX 3: INTERVIEW GUIDE

I want to thank you for taking the time to meet with me today. My name is Kallen Browne and I would like to chat to you about your time working at Discovery Limited, specifically, the digital integration within the company.

I will be recording the session because I don't want to miss any of your comments. Although I will be taking some notes during the session, I can't possibly write fast enough to get it all down.

All responses will be kept confidential. This means that your interview responses will only be shared within my paper and any information included in the paper does not identify you as the respondent. Remember, you don't have to talk about anything you don't want to and you may end the interview at any time.

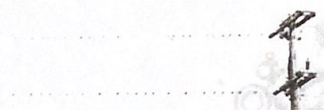
Are you willing to participate in this interview? Great, I just need you to sign this consent form, confirming you agree with the above.

1. What is your current position at Discovery and how long have you worked for Discovery Health?
2. Have you been a witness to the digital integration within Discovery Limited?
3. What are your overall thoughts on the digital integration?
4. Do you think Discovery makes use of/integrates more digital technologies compared to their competitors?
5. In your opinion, do you think this integration has changed/ had an impact on the systems at Discovery Health?
6. If so, how?
7. In your opinion, do you think this integration has changed/ had an impact on the processes at Discovery Health?
8. If so, how?
9. Do you think there is any negative impact on Discovery's digital integration in terms of South Africa being behind in technology compared to other countries?
10. Do you think that the changes in the systems and processes since the digital integration have had any impact on client claims at Discovery?
11. If so, how?
12. Do you think that this impact has changed the amount of client claims at Discovery?
13. In what way has it impacted the amount of client claims?
14. Is this a positive or negative impact?
15. Where do you see Discovery in the next 5 years in terms of their digital integration?

Closing comments

- Is there anything you would like to add?
- I will be analysing the information you have given me and submitting the transcript to you for your signing off, before including it in my report.
- I will be happy to send you a copy of my final report to review at that time, if you are interested.
- Thank you for your time.
- I should have all the information I need. Would it be alright to contact you again if I have any more questions? Thanks again.

APPENDIX 4: PARTICIPANT CONSENT FORM



Consent form for participants

I, _____, agree to participate in the research conducted by Kallen Browne about the digital integration at Discovery Health.

This research has been explained to me and I understand what participation in this research will involve. I understand that:

1. I agree to be interviewed for this research.
2. My confidentiality will be ensured. My name and personal details will be kept private.
3. 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.
4. I may choose not to answer any of the questions that are asked during the research interview.
5. I may be quoted directly when the research is published, but my identity will be protected.

Signature

Date

APPENDIX 5: GATEKEEPERS LETTER



2 August 2019

Vega School
444 Jan Smuts Avenue
Bordeaux
Randburg

Dear Sir | Madam

This serves to confirm that Kallen Brown has been approved to do her research on the Digital Integration at Discovery Health.

Should you require additional information, please contact me at the number listed below.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Zimkhitha'.

Zimkhitha Saungweme
Head: Discovery Health People
011 529 0597

Discovery Health (Pty) Ltd. Registration number: 1997/013480/07. An authorised financial services provider, administrator of medical schemes.
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APPENDIX 6: ETHICAL CLEARANCE

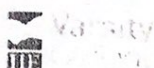


13 of Aug 2019

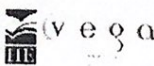
Student Name: Kallen Browne

Student Number: 15019502

Vega Durban



Re: Approval of Honours in Creative Brand Communications Proposal and Ethics Clearance



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 we hereby provide you with ethical clearance to proceed with your data collection.

- There may be some aspects that you still need to address in your proposal. If this is the case, feedback will be provided to you in writing. You will need to address these aspects in consultation with your supervisor.

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

We wish you all the best with your research!

Supervisor

Alec Bozas

Academic Manager

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APPENDIX 7: ORIGINALITY REPORT