



**'The impact of fourth industrial revolutions'
digital influence on negotiation in South Africa**

BY

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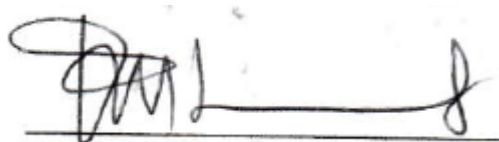
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Business Administration to the Faculty of Commerce, Law, and
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DECLARATION

I Sandile Mbonambi declare that this research report entitled 'The impact of fourth industrial revolutions' digital influence on negotiation in South Africa' is my own unaided work. I have acknowledged, attributed, and referenced all ideas sourced elsewhere. I am hereby submitting it in partial fulfilment of the requirements of the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. I have not submitted this report before for any other degree or examination to any other institution.



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ABSTRACT

The aim of the study was to assess the nature of change arising from the digitalisation of negotiations and evaluate the implications of these digital transformations on negotiations. To achieve this aim, a study was conducted on a sample of N = 43 participants from the KwaZulu Natal Department of Health (KZN DOH). Data was collected through self-developed instruments to measure both negotiation and digitalisation. A quantitative methodology was adopted with descriptive, correlation and regression analyses used to analyse data.

The results of the study revealed that generally, negotiations were an important part of the organisational process in the KZN DOH and that digitalisation was generally high. Digitalisation was found to have a significant positive impact on negotiations. The implication of these findings is that the KZN DOH needs to invest in digital technologies in order to enhance the quality and level of negotiations in the organisation.

While every effort was taken to ensure that this study is valid and that its findings added value to the KZN DOH, the study still had some limitations. Firstly, this study was quantitative therefore it was not possible to enquire into the reasons why participants would have rated a statement in a way they did. In future, researchers may need to adopt either a mixed method or a qualitative design to deal with limitations of a quantitative design. In addition, the study was cross-sectional, meaning the responses were solicited at a particular point in time. That implies that whatever happened before or after the study could not be captured. In future, a longitudinal study would need to be adopted to account for changes in negotiation and digitalisation before and after the cross sectional period.

TABLE OF CONTENTS

DECLARATION.....	3
Table of contents	5
Table of figures 9	
Definition of key terms and concepts	10
1 Introduction to the research	11
1.1 Background and context	11
1.1.1 Digitalisation	11
1.1.2 Negotiations	11
1.1.3 An introduction to formative evaluation.....	12
1.2 Research conceptualisation.....	12
1.2.1 The research problem statement	12
1.2.2 The research purpose (aim and objectives) statement	13
1.2.3 The research questions as well as where applicable accompanying research hypotheses or research propositions.....	14
1.3 Delimitations and assumptions of the research study.....	15
1.4 Significance of the research study	16
1.5 Preface to the research study	16
2 Literature review	18
2.1 Research problem analysis.....	18
2.1.1 Influence of digitalisation on negotiation.....	18
2.1.2 Covid-19 and the acceleration of digitalisation and implications on negotiation.....	19
2.1.3 Negotiation opportunities and coping strategies for businesses in light of digitalisation	19
2.1.4 Challenges of digitalisation on negotiation	20
2.2 Research knowledge gap analysis	20
2.3 Quantitative variables key to the research.....	22

2.3.1	Digitalisation	22
2.3.2	Negotiation.....	23
2.4	Framework (s) for interpreting research findings	24
2.4.1	Porter’s Value Chain Theory	24
2.4.2	Individual learning theory	25
2.5	Summary and conclusion.....	26
2.5.1	Summary of literature reviewed	26
2.5.2	Proposed research strategy, design, procedure and methods arising from the literature reviewed	27
3	Research strategy, design, procedure and methods.....	28
3.1	Research strategy.....	28
3.2	Research design	29
3.2.1	Cross-sectional design	29
3.3	Research procedure and methods	29
3.3.1	Research data and information collection instrument.....	30
3.3.2	Research target population and selection of respondents	30
3.3.3	Ethical considerations when collecting research data	32
3.3.4	Research data and information collection process	33
3.3.5	Research data and information processing and analysis	33
3.3.6	Description of the research respondents.....	34
3.4	Research strengths – reliability and validity measures applied.....	35
3.5	Research weaknesses—technical and administrative limitations.....	36
4	PRESENTATION OF RESEARCH RESULTS	37
4.1	Sample analysis	37
4.1.1	Gender	37
4.1.2	Level of education.....	38
4.1.3	Age and Years of Experience.....	38
4.1.4	Years of experience.....	39

4.2	Instrument Reliability	40
4.3	Descriptive statistics	41
4.3.1	Digitalisation in KZN Department of Health.....	41
4.3.2	Level of changes in negotiation	42
4.4	Correlation analysis.....	44
4.5	The influence of Digitalisation on Negotiation	45
4.6	Summary.....	46
5	THE DISCUSSION OF RESEARCH FINDINGS	47
5.1	Introduction.....	47
5.2	Sample analysis	47
5.3	Instrument reliability	48
5.4	Descriptive statistics	48
5.4.1	Digitalisation in the KwaZulu Natal Department of Health	48
5.4.2	Level of changes in negotiation	50
5.4.3	Continuing value of traditional negotiation principles.....	50
5.5	Correlation analysis.....	51
5.6	The influence of Digitalisation on Negotiation	52
5.7	Summary.....	52
6	SUMMARY, CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS	54
6.1	Summary.....	54
6.2	Conclusion	54
6.2.1	Conclusion pertaining to whether the six principles of negotiations are still relevant in the current digital era	54
6.2.2	Conclusion pertaining to how digitalisation has influenced the traditional principles of negotiations.....	54
6.2.3	Conclusion pertaining to opportunities brought about by digitalisation on negotiations	55
6.2.4	Conclusion pertaining to the challenges faced by the KZN DOH as a result of digital negotiations	55

6.2.5	Conclusion pertaining to the levels of digitalisation in the KZN DOH.....	55
6.3	Limitations of the study.....	56
6.4	Recommendations	56
References		58
Appendices		62
Appendix 1.1:	Data collection instrument.....	63
Appendix 2.1:	One-page bio of the researcher including declaration of interest in the research and funders, if any.....	66
Appendix 2.2:	Participant information sheet	67
Appendix 2.3:	Informed consent	69
Appendix 2.4:	Ethical Clearance Certificate.....	71
Appendix 3.1:	Dully filled in data collection instrument(s)	72

TABLE OF FIGURES

Figure 1: Gender Statistics.....377

Figure 2: Participants' Level of Eduvcation388

Figure 3: Participants' age399

Figure 4: Participants' Years if Experience.....399

DEFINITION OF KEY TERMS AND CONCEPTS

Negotiation – dialogue between two or more people with opposing interests whose aim is to reach a beneficial outcome among the negotiating parties (Thompson, Wang, & Gunia, 2010).

Digitalisation – the process by which businesses and organisations adopt new technologies, particularly information and communication technologies, to change the way they deliver value to stakeholders (Njenga, 2018).

Influence – attempts to change attitudes and opinions through communication and persuasive means rather than through violent or forceful means (Maria, 2013).

Impact – refers to a marked influence on something or someone which results in altered behaviour (Hearn & Buffardi, 2018).

Fourth Industrial Revolution – refers to advances of science and technology, in which the Internet of Things (IoT) and its supporting technologies serve as backbones for Cyber-Physical Systems (CPS) and smart machines are used as the promoters to optimize production chains (Liao, Loures, Deschamps, Brezinski, & Venâncio, 2017).

1 INTRODUCTION TO THE RESEARCH

1.1 Background and context

This research evaluated the impact of digitalisation on negotiations. However, before getting to the research conceptualisation (Section 1.2), the terms and concepts used in conceptualising this research in Section 1.1 generally and broadly are introduced – while Chapter 2 has a more specific and detailed discussion on the research context. The research conceptualisation section provides for the research problem statement (Section 1.2.1) and consequently the purpose of this research (Section 1.2.2) as well as the research questions (Section 1.2.3). The delimitations and assumptions of the research study are in Section 1.3 while the significance of the research study is discussed in Section 1.4 and a preface to the research report is provided in Section 1.5.

1.1.1 Digitalisation

The term digitalisation refers to the process by which businesses and organisations adopt new technologies, particularly information and communication technologies, to change the way they deliver value to stakeholders (Njenga, 2018). Digitalisation, therefore, has the impact of changing business models, from the traditional to those that are based on digital technologies (Bouwman, Nikou, Molina-Castillo, & de Reuver, 2018). Though the use of digitalisation to provide new revenue streams is mainly relevant to private sector organisations, using digitalisation to provide and exploit opportunities to create value for stakeholders applies to all organisations (Laudon & Laudon, 2012).

1.1.2 Negotiations

Thompson, Wang, & Gunia (2010) define negotiation as a “decision-making process necessary whenever we cannot achieve our objectives single-handedly.” Some features of negotiation are evident in this definition. Firstly, negotiation is a process, rather than a once-off event (Wong, 2015). Indeed, Heald (2020) agrees with this view and asserts that negotiation consists of six interdependent steps, namely process, substance, relationship, time and proportionality. Another feature of negotiation is that it involves making decisions on the substance of negotiations (Wong, 2015). Lastly, negotiations occur where

negotiators have to collaborate to complete tasks – where it is not possible for individual negotiators to achieve their objectives individually (Thompson, Wang, & Gunia, 2010).

1.1.3 An introduction to formative evaluation

The focus of the study is on the impact of the fourth industrial revolution and digitalisation on negotiations. The objective of the research is to evaluate whether there is a relationship between digitalisation and negotiations. The study adopts a cross-sectional research design and a quantitative research method. Data is collected through the administration of two self-reported survey questionnaires, namely the Digitalisation Instrument and the Negotiation Instrument to measure digitalisation and negotiation, respectively. Descriptive statistics, and correlation were calculated to measure the effect size between digitalisation and negotiation. Linear regression was used to assess the extent to which digitalisation can be used to predict negotiation. The variables of the study are digitalisation and negotiation. As noted by Heald (2020) and Thompson, Wang, & Gunia (2010), some of the traditional principles of negotiation are still relevant, despite the increased levels of digitalisation. The analysis of the variables above provided insights into how the two variables are related and how digitalisation influences negotiation. The overarching assumption of the study is that negotiations are an important aspect of business processes that the organisation uses to create value for stakeholders and that increasing levels of digitalisation has significant impact on how negotiations take place.

1.2 Research conceptualisation

1.2.1 The research problem statement

The study investigated the impact of digitalisation on business processes, with a particular focus on negotiations. Negotiations are an important aspect of building relationships (Cummins, 2020). The role of organisational actors in negotiations increases with one's level of seniority within the organisation. For example, in the medical profession, the individual medical doctor needs to negotiate with clients on the best possible ways to help with the clients' illnesses and other ailments. This is at a personal level, and usually less complicated, except where the patient has suffered incapacitation and there is need for negotiations with the legal relatives and acquaintances. For senior management, such as

the Head of the Health Department (HOD) in KwaZulu Natal (KZN), the negotiations are relatively complex, involving several parties, some of whom may have conflicting interests. For example, the HOD needs to negotiate, persuasively, conditions of employment for his/her medical colleagues with trade unions and provincial government officials. The HOD also needs to negotiate with the provincial council on budget allocations.

Traditionally, negotiators have had to be in the same physical place. However, due to the Coronavirus 2019 (COVID-19) pandemic, many governments have placed significant restrictions on gatherings. This has left negotiators being deprived of one of the key components of negotiations, place. The other dimensions of negotiations are the negotiation process, the substance of negotiations, relationships between negotiators, the time and the proportionality of negotiations (Heald, 2020). To close the gap left by the prohibition of large gatherings, and to safeguard the health of negotiators, negotiations have moved to digital platforms, such as Zoom and Microsoft Teams (World Economic Forum, 2020). Nassif, Corrêa & Rossetto (2020) explain that many organisations were caught unprepared and have had to adapt and move business processes, such as, negotiations digitally. This raises the question on the impact that this move has had on business processes such as negotiations.

1.2.2 The research purpose (aim and objectives) statement

The study evaluated the impact of digitalisation on negotiations as a result of COVID-19. The aim of the study was to assess whether digitalisation would lead to a change from face to face negotiations to digital negotiations at the DOH in KZN, and evaluate the implications of these digital transformations on negotiations. A quantitative method research design was adopted, seeking to gain a deeper understanding from experienced negotiators how their roles have been impacted by digitalisation while also scientifically testing the significance of these changes. A questionnaire was used to collect quantitative data. The following research objectives were relevant in order to achieve the aim of this study:

- To identify the factors influencing the digitalisation of negotiations at the department of Health in KwaZulu Natal;
- To assess the impact of digitalisation on negotiations at the department of Health in KwaZulu Natal;

- To analyse opportunities presented by digitalisation on negotiations at the department of Health in KwaZulu Natal;
- To assess the challenges for negotiators arising from digitalization at the department of Health in KwaZulu Natal;
- To make recommendations to the KZN DOH management on how to improve negotiations in the face of digitalisation.

1.2.3 The research questions as well as where applicable accompanying research hypotheses or research propositions

1.2.3.1 Question 1: Are the six principles of negotiation still relevant in the current digital age?

Null hypothesis: The six principles of negotiation are still relevant in the current digital age.

Research hypothesis (directional or non-directional): The six principles of negotiation are no longer relevant in the current digital age.

Proposition: The rise of digitalisation results in changes in business approaches to negotiations which mean that there is a connection on the digital transformation and negotiations by businesses.

1.2.3.2 Question 2: How does digitalisation have influence on traditional principles of negotiations?

Null hypothesis: Digitalisation has no influence on traditional principles of negotiations.

Research hypothesis (directional or non-directional): Digitalisation has influenced six principles of negotiations.

Proposition: Rapid digitalisation has significantly changed businesses processes in general and negotiations in particular.

1.2.3.3 Question 3: Are there opportunities that are brought about by the 4IR and digitalisation on negotiations?

Null hypothesis: There are no negotiation opportunities brought about by the 4IR and digitalisation.

Research hypothesis (directional or non-directional): The 4IR and digitalisation presents negotiation opportunities for businesses.

Proposition: 4IR and digitalisation creates new ways of negotiating by businesses. The more virtual businesses go, the more likely the change in modalities of negotiation.

1.2.3.4 Question 4: Are there challenges faced by businesses in negotiations as a result of digitalisation?

Null hypothesis: There are no challenges do negotiators face because of digitalisation.

Research hypothesis (directional or non-directional): There are challenges that negotiators face because of digitalisation.

Proposition: Digitalisation creates new ways of negotiating and this has brought about challenges for negotiators.

1.2.3.5 Question 5: What are the current levels of digitalisation in the KZN DOH?

1.3 Delimitations and assumptions of the research study

The change in the nature of business processes, such as negotiations, is attributable to a number of factors (Heald, 2020). Kaplan (2019) explains that the need for changes in business processes, such as negotiations, arise from two broad factors, namely increasing competition and globalisation, all emanating from the development in information and communication technologies (ICT). Rising competition demands better competitor intelligence from organisations, more competing products and services, and faster responses to the fast-changing business environment (Kotler, Burton, Deans, Brown, & Armstrong, 2013). Moreover, globalisation means that businesses need to consider not only local competitors, but global ones, as well (Kotler, Burton, Deans, Brown, & Armstrong, 2013). In addition, access to global capital markets, because of globalisation, means that organisations need to be prepared to negotiate the terms of such capital (Schwab, 2016). Due to globalisation, businesses have invested in foreign business operations in several countries (Schwab, 2016). In addition, as already indicated in the problem statement, digitalisation has significantly changed business processes such as

negotiations (Gupta & Starr, 2014). Therefore, while increasing competition, developments in ICT, digitalisation and globalisation have all had significant influences on negotiations; the current study only focused on the influence of digitalisation on negotiations only. Though globalisation has been talked about for over 2000 years now (Vanham, 2019), and competition being the order of capitalist societies (Smith, 2007), the velocity at which digitisation has changed businesses since the 1990s is unprecedented (Schwab, 2016), hence the focus of this study on digitalisation

1.4 Significance of the research study

Failing to understand the impact of digitalisation as a result of fourth industrial revolution on negotiations is likely to have significant impact on both private and public organisations. Failing to understand how digitalisation influences negotiations may lead to challenges such as the trade wars faced between China and the United States of America (The Economist, 2018) and may cause delays in critical decisions such as witnessed during the Brexit negotiations, where in several cases, negotiators failed to reach agreement (Norman & Colchester, 2020). From a business perspective, failure to negotiate may lead to reputational damage and negative publicity as witnessed in the Makate and Vodacom case that ended up spilling into the public domain and later into the courts (Venter, 2020). The parties involved, with better negotiations, could have resolved the case internally without involving the courts and the media. These cases show that failing to negotiate properly may result in negative consequences for organisations. Therefore, it is paramount that organisations understand how digitalisation influences negotiations in order to ensure that negotiations remain effective.

1.5 Preface to the research study

This study is made up of six chapters, including this introduction. Chapter 2 focuses on literature review. The review is aimed at evaluating existing literature on the phenomenon covered in this study and to identify any existing research gap. Chapter 3 discusses the research methodology that was used to carry out this study. After the collection of data, the results of the study are presented in Chapter 4 and discussed in Chapter 5. In Chapter 6, conclusions are drawn from the results and recommendations are made to the relevant people in the KZN DOH on how to enhance the value of negotiations in the face of digitalisation.

2 LITERATURE REVIEW

This chapter has three broad objectives, namely, to understand the research problem, to identify the knowledge gap, and to develop a framework for interpreting the research findings. Specifically, Section 2.1, details the research problem. Section 2.2 reviews literature on studies that have attempted a similar study or research. With information arising from Section 2.2, the following section details the quantitative variables that are key to this research, as well as a framework that will be used to interpret research findings in Section 2.4.

2.1 Research problem analysis

2.1.1 Influence of digitalisation on negotiation

The rapid transformation of industries through digitalisation represents a shift in the approaches to the way organisations operate (Laudon & Laudon, 2012). Digitalisation has accelerated the transition into virtual business systems (Bejleri & Fishta, 2017). As highlighted already above, traditionally, negotiation has been anchored on six dimensions namely, negotiation process, substance, relationship of negotiators, time, place, and proportionality (Heald, 2020). Digitalisation has altered these dimensions in one way or another. According to Greenfield (2017), because of digitalisation, face-to-face meetings are no longer necessary. However, as Vetschera (2013) explains, face-to-face meetings have been an important ritual in negotiations where, in some cases, negotiators have exchanged gifts before or after negotiations. At the same time, the move to digital negotiations has also added another dimension, namely, convenience. According to Cummins (2020), digital negotiations are more convenient and easier to plan than traditional ones. However, Fay & Ghadimi (2020) note that unless negotiations are conducted in real time using face-to-face channels, they may become less personal and that reduces the possibility of overall success for negotiators. Cummins (2020) points out that channels, such as emails, are less effective, despite being convenient because of the lack of the human face that may be necessary in certain circumstances. Furthermore, Heald (2020) explains that in terms of the negotiation process, digitalisation has changed steps such as preparation and exchange of perspectives by negotiators. The preparations for face-to-face meetings, in which the negotiators' first impression could be of

importance may be different from a digital one where the negotiators may not be able to see each other's faces.

2.1.2 Covid-19 and the acceleration of digitalisation and implications on negotiation

The outbreak of the coronavirus disease -2019 (COVID-19) pandemic accelerated the pace of digitalisation of business processes, including negotiations, as businesses seek to adapt to the new contactless way of business (Cummins, 2020). Travel restrictions, national lockdowns, the need for social distancing implies that face-to-face meetings are no longer possible for negotiation. That has led to the adoption of innovative communication and negotiation channels hosted on virtual platforms (Johnson, 2020) and (Cummins, 2020). The need to wait for working hours to conduct businesses is no longer relevant given that many negotiators are working from home. This has also removed the need for lengthy and bureaucratic processes that have characterised traditional negotiations. The implications of the COVID-19 pandemic are that the measures put in place to deal with the pandemic has meant that traditional modalities and the process of negotiations have actually evolved. Commercial innovation in terms of virtual negotiations is therefore at the heart of business progress amid the COVID-19 pandemic (Cummins, 2020). Heald (2020, p.12) explains that the nature of the negotiation dimensions is that they are continuously interacting and are part of an “interconnected system where the dimensions of substance, time, place, relationship, process and proportionality have to continuously accommodate one another.” This implies that none of these dimensions can stand on their own. Therefore, a change in one, say time, may prompt a change in the other, say process. Therefore, as a result of rapid digitalisation that is driven by the COVID-19 pandemic, the entire negotiation process has seen significant changes.

2.1.3 Negotiation opportunities and coping strategies for businesses in light of digitalisation

Under the stimulus of digitalisation, most firms are set to increase the proportion of flexible human resources through enhanced staff training and engagement (Schwab, 2016). Cummins (2020) further notes that flexibility and organisational restructuring are

some of the opportunities available for the businesses to harness due to the increased penetration of technologies in the digital age. This means that the process of negotiations will have to shift from the physical to be online (virtual) which represents an alteration on the traditional forms of negotiations to a more effective, dynamic and flexible mode. In other words, digitalisation provides negotiators with the opportunity to rethink the way negotiations have been conducted from time immemorial.

2.1.4 Challenges of digitalisation on negotiation

Great technological advances can sometimes be disruptive to the incumbent firms as well as to existing social structures (Schwab, 2016). To ensure sustainable growth, not only the firms, but also the governments, should take measures to cope with the challenges and seize the opportunities that digitalisation brings. Shortage of innovative human resources to cope with the pace of technological change has been one of the major challenges that digitalisation brings about to negotiation in general (Heald, 2020). This means that digitalisation of support services, such as negotiations, demands that businesses invest more in human resources and technology infrastructure so that organisations are able to integrate to services with online systems. Thus, development of a digital footprint by governments and businesses for viability purposes is critical. However, lack of efficient and effective talent cultivation by most organisations is a major obstacle that undermines the pace of adaptability of the negotiations (Mathis & Jackson, 2015). Limited skills and resources have been mentioned as some of the challenges that impede effective transformation of negotiations in response to digitalisation (Cummins, 2020). It is common in some virtual communication platforms to lose contact with the other negotiators due to poor internet connection (Behl, O'Brien, & Marakas, 2017). Moreover, even though digitalisation is seen as allowing negotiations to be conducted from anywhere in the world, this is not usually the case, particularly in developing countries where network connection is often poor (Schwab, 2016). For negotiators, these challenges have a bearing on decisions such as negotiation channels and places where negotiations take place.

2.2 Research knowledge gap analysis

Guoping, Tan & Wang (2017) studied the digital revolution: technological drivers, impacts and coping methods and found that the era of the fourth industrial revolution has changed

industries, economies and business significantly. The study however, did not specifically mention negotiations as one of the processes that has been changed by digitalisation. In the same vein, Hudson (2017) conducted a study on value propositions for the internet of things in response to the rapid digitalisation of businesses process and concluded that digitalisation has brought about significant business changes which, among others, is reorientation of the means of production, organisational structure and management roles and responsibilities. It is important to indicate that both the studies above point to the significant organisational changes brought about by digital technologies.

However, no known study has so far investigated the influence on digitalisation of each of the dimensions of negotiations identified in this study that focused on the public health sector in KwaZulu Natal. This is so, despite, as discussed earlier, that negotiation is an important component of any successful organisation, especially in the age where constant engagement with stakeholders is critical for organisational survival. Therefore, failing to understand the changes in negotiation presents a risk of backlash and misunderstanding of the organisation's position on key issues such as climate change and sustainability in general.

In another study, Cummins (2020) found that the rapid digitalisation has brought about new modes of negotiations, such as the use of virtual platforms. However, Cummins (2020) did not emphasise the effects of digitalisation on specific dimensions of negotiations, the negotiation challenges, prospects and opportunities that digitalisation brings to negotiations.

Heald (2020) noted that literature seldom points to the relevance of the principles of negotiation in the era of digitalisation. In other words, although digitalisation presents significant transformations in business processes, studies have rarely evaluated the relevance of traditional dimensions of negotiations, more specifically, their substance, process, time, relation and proportionality of the negotiations. Therefore, this current study was aimed at addressing this deficit in literature through answering this research question: What impact has digitalisation had on the six principles of negotiation? The general proposition to this research question is that digitalisation results in changes in business approaches, including negotiations, prompting the change in the way negotiations have been carried out traditionally. The statistical and practical significance of such changes should be known so that organisation can decide whether it is necessary for them to invest resources into the new ways of negotiations.

According to Tim (2020), understanding the relationship between digitalisation and negotiations demands a more accurate and precise statistical test of the significance of the relationships in order to reach a concise conclusion. This simply implies that understanding the influence of digitalisation on negotiations requires a systematic investigation and testing of the relationship between the variables to reach a more precise conclusion about the statistical significance between the variables. However, studies by Guoping, Tan & Wang (2017) and Hudson (2017) adopted a qualitative approach in investigating the implications of digitalisation on the business processes. Though these studies allowed an in-depth interrogation of the influence of digitalisation on business processes such as negotiations, they lack the robustness that quantitative studies provide.

Schuh, Gartzen, Rodenhauser & Marks (2015) also studied the impact of digital technologies, focusing on business systems and workplaces; and recommended that since there is interdependence between digital technology and service deliver by organisations, there is a need for organisations to automate services, where possible. Eberhard (2017) also evaluated the utility of digitalisation in organisations and concluded that physical organisations will cease to be important, in most cases, due to the increase in opportunities of delivering better services through digital platforms. It is imperative however to indicate that though digitalisation has brought significant changes to the businesses, traditional modalities are still relevant and some of these simply need to be integrated into new business models rather than being earmarked for extinction. The natural question that follows this observation is whether digitalisation represents a radical change from physical to virtual organisations and if so, what are the implications to the traditional modes of negotiation? Are virtual negotiations enough to replace the traditional negotiations and if so, which of the dimensions of dimensions of negotiations should be preserved and which of these should be changed? All these questions can be narrowed down to the investigation of the influence that digitalisation has had on negotiations.

2.3 Quantitative variables key to the research

2.3.1 Digitalisation

Digitalisation is defined as the use and integration of digital technologies which is aimed at transforming business processes (Schwab, 2016). Digitalisation is the process through which organisations leverage digital technologies in order to enhance their adaptive

capacity to evolving modes of doing business (Eberhard, 2017). Measuring digitalisation can be analysed at two dimensions, namely national or regional level and entity or organisational level (Kotarba, 2017; Bouwman, Nikou, & de Reuver, 2019). At national level, digitalisation can be measures in terms of connectivity, ICT integration, extent of eGovernment, internet access growth, and mobile technology adoption and penetration (Kotarba, 2017). These metrics are useful to development experts and policy makers. However, most of these variables are outside the control of individual organisations. Bouwman, de Reuver & Nikou (2019) developed an ordinal instrument that measured digitalisation based on eight dimensions, namely business model practices, business model experimentation, competitive intensity, innovation activity, innovativeness, overall performance, strategy and technology turbulence. Innovation activity includes measures, such as new product development aligned to the organisation's digital strategy and digital ways of advertising products and services. Business model practices measure the extent to which the organisation's business model incorporates digitalisation. Furthermore, Raut (2020) suggested that digital proficiency, customer focus and return on innovation can be used to measure digitalisation. There is no consensus yet, from an academic point of view, on how digitalisation can be assessed within the organisation. However, all organisational measures proposed above are likely to have impacts on negotiations. For instance, digital proficiency can influence the level of confidence of negotiators.

2.3.2 Negotiation

Negotiation is understood as the management art and science of resolving conflicts between and among stakeholders to reach mutually acceptable positions between both parties for the purposes of progress and harmony (Greenfield, 2017). Negotiation is understood as the leadership and management skill to deal with a number of problems and opportunities that may affect the entity (Cummins, 2020). A synopsis of these definitions provides an understanding that negotiation is a management function responsible to negotiate effectively in a wide range of business contexts, including deal making, employment discussions, corporate team building, labour/management talks, contracts, handling disputes, employee compensation, business acquisitions, vendor pricing and sales, real estate leases, and the fulfilment of contract obligations. Therefore, the rapid industrial transformation through a technological wave demands businesses and organisations respond to the new wave of industrial development for their survival. The cardinal question to consider would be whether industries will be able to cope with the

pace of industry 4.0 and digitalisation for survival. If so, what modalities for negotiation will be available in line of these developments in the digital world?

Heald (2020) identifies six dimensions of negotiations, as already discussed above. Therefore, any measure of negotiations should include these dimensions if it is to be seen as a complete measure of the construct. An attempt to measure negotiation process was made by Filzmoser, Hippmann & Vetschera (2016) in their study investigating the multiple dimensions of negotiation processes. Thomas & Kilmann (1974), on the other hand, advised that negotiation should be measured by a scorecard rather than a one factor measurement scale. The proposed scorecard is made up of the impact of negotiation on financial benefits, the operational benefits arising from negotiations, alignment of negotiation outcome with enterprise-level goals and targets and the impact of negotiations on developing lasting relations between negotiators. Other measures included are the short-term vs. long-term (strategic) benefits of negotiations, the social and environmental benefits arising from negotiations and the learnings from the negotiation, as part of measuring negotiators' continuous improvement (Thomas & Kilman, 1974). However, none of these measures have been tested statistically in the contexts of COVID-19 and health sectors in KZN. Nonetheless, it is clear that negotiation is multidimensional and its measure should reflect that. In this study, a self-developed 5-point Linkert-type scale was developed for that purpose.

2.4 Framework (s) for interpreting research findings

2.4.1 Porter's Value Chain Theory

Negotiation, as indicated above, is a business process. Business processes are intended to generate value for the organisation. According to Porter (2008), carrying out of any business activity or process is only justifiable if, in the process, the organisation is able to generate value for its stakeholders. Therefore, understanding how activities, such as negotiations, link to other business activities and create value for the organisation is critical. As a result, in this study, the value chain will be used to assess the extent to which negotiations create value for the organisation, and hence assess whether it is necessary for organisations to expend resources on improving negotiations.

According to Rayport & Sviokla (2018), Porter's value chain theory suggests that a competitive advantage of the company cannot be understood outside of the internal structures and processes of the organisation. Negotiations permeate through the primary

and secondary activities that form part of the value chain. To Li, Hou, & Wu (2017), the value chain theory provides a powerful explanation of the power of digitalisation in enhancing the efficiency and effectiveness of the organisation. The theory proposes that the value chain is made up of both physical and virtual activities.

According to Sánchez Bengoa, Ruediger Kaufmann, & Vrontis (2012), the value chain theory is important in explaining the benefit streams provided by digitalisation to organisations. The theory explains that internal structures are dependent on each other and also depend on the external structures which are integrated into the virtual value chain. The virtual value chain comprises information and inter-linkages that the customers and the business create (Sánchez Bengoa, Ruediger Kaufmann, & Vrontis, 2012). Digitalisation provides the necessary opportunities for the development of the virtual value chain in an organisation through virtual negotiations. Therefore, providing information about products and the production process as well as customer relations are considered part of the value chain that reflects the impact of digitalisation on negotiations. Rayport & Sviokla (2018) noted that the value chain theory can be used to explain the fact that through digitalisation, production and other processes are interlinked with information-based products that mould business relations with stakeholders. Therefore, moulding of business relations indicated by Rayport & Sviokla (2018) explains the power of digitalisation on negotiations in the value chain of the organisation. Porter's value chain theory can be used to explain how digitalisation influences the different processes and systems of the organisations, with particular focus on negotiations.

2.4.2 Individual learning theory

The individual learning theory considers that human beings are a decisive factor in the successful implementation of digitalisation and that human-machine interactions will become more common with digitalisation (Siemens, 2005). Learning through interactions with machines appears to be equally important as learning in social situations (Schuh, Gartzén, Rodenhauser, & Marks, 2015). Negotiations as part of the operations of businesses are likely to change in terms of focus, dimension and modalities for them to remain relevant and that explains the need for individuals to learn in order to cope with the new mode of operations (Heffler, 2001). The individual learning theory posits that due to digitalisation; networking and collaboration among enterprises will include more virtual rather than direct interactions (Kop & Hill, 2008).

The individual learning theory explains that technology and digitalisation provides challenges in organisations that might call for learning and relearning by people within organisations (Siemens, 2005). These new challenges imposed by digitalisation may call for a new concept of 'man in the organisation', explaining a digitalised man who performs complex, integrated tasks, works in virtual networks with individuals from other cultures using new media and sharing information, makes complicated decisions, is self-directed, open to changes and embraces life-long learning and growth. This means that the impact of digitalisation on negotiations also has challenges that the organisations have to transform and adapt to enhance their viability. This simply means that digitalisation seems to be the game changer in the history of negotiations and the individual learning theory can provide insights into what is possible within the context of digitalisation.

2.5 Summary and conclusion

2.5.1 Summary of literature reviewed

The section focused on presenting the reviewed literature in the study. The section presented the research problem analysis, knowledge gap and variables for the research. The section presented the interpretive frameworks that can be used to explain the influence of digitalisation on negotiations. The study used the value chain theory by Porter that places emphasis on understanding the key business processes and systems, which create value and competitive advantage to organisations. Understanding these processes helps to understand the nature and role of negotiations in creating value for the organisation. It has been noted that negotiations, though not part of the expressed primary and secondary value chain activities as proposed by Porter (2008), permeate through the entire value chain. The study also considered the individual learning theory to explain the impact of the influence of digitalisation on negotiations. Literature points out that digitalisation brought significant changes to the manner in which business is conducted. There is increased automation of services and the coming of the digital era signifies a shift to the modalities of communication. A research by Greenfield (2017) noted that digitalisation significantly transformed the manner in which negotiations are conducted. Cummins (2020) noted that with the current Covid-19 pandemic where physical meetings are no longer possible, there is a need for negotiators to adapt to the demands of digital platforms.

Literature reviewed also revealed that even though there have been isolated studies on the impact of digitalisation on business processes in general (for example; Li, Hou, & Wu,

2017), none of these have focused on the influence of digitalisation on negotiation in KwaZulu Natal's health sector. The aspect of negotiation does not feature in many studies conducted on the effects of the fourth industrial revolution on businesses (for example; Guoping, Tan & Wang 2016; Hudson, 2017). In the main, the question of whether digitalisation represents a radical change from physical to virtual organisations and if so, what are the implications to the traditional modes of negotiation, remains unanswered. Are virtual negotiations enough to replace the traditional modalities and process of negotiations?

2.5.2 Proposed research strategy, design, procedure and methods arising from the literature reviewed

As indicated above, studies by Guoping, Tan & Wang. (2017) and Hudson (2017) adopted a qualitative research approach to investigate the implications of digitalisation on businesses. Both articles used case study designs to investigate how digitalisation has affected business processes. Hudson's (2017) study used an exploratory case study. The justifications on the utilisation of the case study was that case study designs were very successful in information systems research.

Another research by Greenfield (2017), used a mixed method design to investigate the effects of digitalisation on businesses. The study used interviews (telephonic and face-to-face) for the collection of primary data. For the purposes of data triangulation, the research used a survey instrument to collect quantitative data. The research used semi-structured interviews for collection of qualitative data, focusing on a sample of seven (n=7) management professionals. Eberhard (2017) however, used a survey design to explore the effects of digitalisation on the labour market. A quantitative study using expert surveys was conducted for the purposes of generating quantitative data.

A close analysis of the methodologies used by the scholars on similar topics, shows that scholars used different methodologies in the selection of respondents, collection and analysis of data. Based on these observations, this study adopted a cross-sectional design to understand the impact of digitalisation on negotiations. The researcher used a quantitative approach since the literature shows that very few researchers used that approach in the analysis of the research problem. A quantitative approach would therefore ensure that the researcher examines the relationship between the fourth industrial revolution and digitalisation robustly. There is a need for the examination of the statistical significance of the relationship between digitalisation and negotiations.

3 RESEARCH STRATEGY, DESIGN, PROCEDURE AND METHODS

In Section 1.2.3, we have posed five questions that this research report intends to answer—that is, are the six principles of negotiation still relevant in the current digital age? What is the impact of digitalisation on negotiations? What are the opportunities that are brought about by digitalisation on negotiations? and What are the current levels of digitalisation in the KZN DOH?

What strategies can be adopted by businesses and government to cope with rapid digitalisation on negotiations? We have since reviewed literature and developed an interpretative as well as conceptual framework that guided the choices of techniques we will use. This chapter identifies and describes research approach, design as well as procedure and methods that we employed in this research to collect, process, and analyse empirical evidence. Broadly, this Chapter has three objectives; namely, to identify and describe the research strategy (Section 3.1), the research design (Section 3.2), as well as the procedure and methods (Section 3.3). The chapter also describes the reliability and validity measures (Section 3.4) that this research applies to make it credible as well as the technical and administrative limitations of the choices we make (Section 3.5).

3.1 Research strategy

A research strategy is an approach that is used to answer research questions or problems of the study (Bryman, 2012). Three major research approaches are used. These are quantitative, qualitative, and mixed method strategy. A quantitative strategy deals with the use and analyses of numerical data using statistical techniques to predict or describe the relationship between variables (Burns & Grove, 2005). A qualitative strategy on the other hand is a strategy or approach that seeks to understand a given research problem or topic from the perspectives of the local population it involves (Creswell, 2009). A mixed method strategy is a research strategy that utilises both qualitative and quantitative strategies to answer the same problem (Burns & Groove, 2005). In this study, a quantitative research strategy was adopted. This decision was informed by the fact that there is no known study that has developed and tested measures of both digitalisation and negotiation that focused on the health sector in KwaZulu Natal. Therefore, this study

aimed to address this gap in the process of assessing the impact of digitalisation on negotiation.

3.2 Research design

Burns and Grove (2003) defined research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. Petterson (1982) concurs with other definitions that a research design is a formally written set of specification and procedures for conducting and controlling a research project. A research design therefore is a plan for carrying out research. Bryman (2012) noted that there are mainly five research designs, which are cross-sectional, longitudinal, case study, comparative, and experimental designs.

3.2.1 Cross-sectional design

A cross-sectional study is one in which data about a continuously existing phenomenon is collected and analysed at a specific point in time (Saunders, et al., 2015). This current study is a cross-sectional study. One similar study that applied the cross-sectional design was by Bouwman, de Reuver & Nikou (2019) that aimed at assessing how digitalisation affected business models. Bouwman, de Reuver & Nikou (2019) pointed out that the cross-sectional design was more realistic, time and cost effective than other possible designs. In addition to the study by Bouwman, de Reuver & Nikou (2017), all the studies reviewed above used cross-sectional design, hence its choice in this study. In addition, this is a cheaper design than other designs such as longitudinal, in which a phenomenon is studied over time (Bryman, 2012). Furthermore, this design is a quicker way of carrying out a study. Such a design was necessary in this study, in light of the time constraints within which this study was conducted.

3.3 Research procedure and methods

This section documents the actual procedure and the methods employed in this research to collect, collate, process, and analyse empirical evidence on the influence of digitalisation on negotiations as a result of 4IR. Broadly, we detail the data and information collection instruments (Section 3.3.1), the target population and sampling of respondents (Section 3.3.2), the ethical considerations during the research process (Section 3.3.3), data and information collection process and storage (Section 3.3.4), data and information processing and analysis (Section 3.3.5) as well as the background description of the respondents who provided empirical evidence for this research study (Section 3.3.6).

Questionnaires were used to collect data for this research. All respondents were kept anonymous and data collected was kept confidential.

3.3.1 Research data and information collection instrument

The study used quantitative research instrument (Appendix 1.1) in the collection of data. In the research, one instrument with three sections was used to collect research data. The sections were as follows:

1. The **demographic section** – this section of the instrument contains the demographic information of respondents such as tenure (to judge the level of understanding of research constructs within the selected organisation) and age to measure the level of maturity of respondents. A detailed demographic instrument and other instruments are added as appendices to this study.
2. The **digitalisation section** – this contains the measures of digitalisation. As indicated above, the items in this instrument were drawn from the literature review.
3. The **negotiation section** – this section of the instrument consisted of measures of negotiations. Again, this was developed from the literature review.

The Negotiation and Digitalisation sections used a 5-point Linkert scale ranging from one (Strongly disagree) to five (Strongly agree).

3.3.2 Research target population and selection of respondents

3.3.2.1 Research target population

Target population refers to the total quantity of research subjects (Burns & Groove, 2005). Target population also refers to the study population which is a group from which the researcher is interested in drawing conclusions. The target population for the study consisted of employees from the department of health in the KZN DOH who have experience in negotiations. There are about 160 employees in KwaZulu Natal Health Department head office whose roles involve negotiation in one way or the other. Respondents included the head of health department in KZN, director general, the management teams for rural district health services, strategy and health support, people management, supply chain management, metro district health services, human resource and infrastructure, technical management services, and HIV and TB management teams.

3.3.2.2 Sampling or selecting respondents from the target population

Sampling is the process of selecting a subset of the population which are selected for a particular study (Bryman, 2012). According to Krejcie & Morgan (1970), sampling is also a technique of selecting individual members or a subset of the population from which to make statistical inferences. Creswell (2013) also defines sampling as the statistical process of selecting a subset (called a “sample”) of a population of interest for purposes of making observations and statistical analysis. A closer analysis of these definitions defines sampling as the process of selecting the actual subjects for the research, that is called a sample. This study used probability-sampling techniques. More specifically, the study used a stratified sampling technique. According to Kothari (2014), stratified sampling is one in which participants are organised into groups – strata – from which random samples are selected. The technique gave all participants the chance to participate in the study. Furthermore, stratifying the sample increases the representativeness of the sample, since respondents are drawn from all levels of the study population. Again, a random sample is one of the requirements of a quantitative study such as the one proposed here, hence the choice of the technique.

According to the central limit theorem, a sample size for a quantitative study should be at least 30 participants (Islam, 2018). Given that response rates for studies using self-reporting instruments is around 50% (Wambua, 2008), this study was based on a sample of 60 participants to cater for non-returned questionnaires. Senior management includes the HOD, the chief financial officer (CFO), director generals (DG’s) and deputy director generals (DDG’s) for Human Resource management, macro policy and planning, corporate management services, specialized and clinical support services, monitoring and evaluation, supply chain and legal units. The following table shows a sample frame for the study:

Population group	Sample size
Senior management	20
Middle management	20
Other employees	20
Total	60

The sampling procedure was as follows:

- Establishment of the number of respondents in the employee database.
- Sending of emails to all KZN department of health employees
- Random selection of 20 employees from each stratum as shown in the table above

3.3.3 Ethical considerations when collecting research data

Adams (2013) stipulates that when a researcher is taking into account issues of ethical concern the researcher is actually applying moral rules and professional codes of conduct to the gathering, analysis, reporting, and publication of data about research subjects, in particular vigorous acceptance of subjects' prerogative to privacy, confidentiality, and informed consent. Ethical considerations relevant to the proposed study are discussed in this section:

3.3.3.1 Privacy and confidentiality

Leedy & Ormrod (2015) explain that to enhance research credibility, the researcher needs to assure participants of their privacy. In this study, collected data was anonymised and no identification information such as names and identification was collected. In addition, no part of the collected data was used for other purpose than this study. Data collected was kept in a password-protected computer file in the researcher's personal computer for the period dictated by the university research guidelines.

3.3.3.2 Permission to conduct research

The study was conducted in the KwaZulu Natal department of health. No permission from the department of health was required to conduct this research.

3.3.3.3 Informed consent

According to Kothari (2014), in cases where a research involves human participants, they should give their consent and advise the responsibility of the researcher is to inform participants of the nature and extent of consent they give. For the purpose of the proposed research, participants' informed consent was sought and participants were required to sign an informed consent form included in Appendix 2.3.

3.3.3.4 Voluntary nature of the study

The quality of research can be enhanced by ensuring that research participants take part in the study freely without inducement or coercion. In this study, participants were informed that their participation would be voluntary and no form of compensation would be offered for participating in the study.

3.3.4 Research data and information collection process

The data collection process refers to the process of gathering data from the participants to answer the research questions and objectives (Creswell, 2014). The following data collection procedure was used:

1. Employees who accepted the invitation to participate in the study were sent the research instruments via online questionnaire, Google Forms.
2. Respondents were required to complete the instruments within agreed timeframes. Those who take longer were followed up and reminded to complete the instruments.
3. Data for completed instruments was downloaded into an Excel spreadsheet.

3.3.5 Research data and information processing and analysis

3.3.5.1 Research data and information processing

Data processing refers to the process of editing, coding, classifying, tabulating, charting and diagramming research data (Hennink, 2015). This means that there was editing, coding, tabulating and charting of the research data for processing. For the purpose of this study, the following process was followed to process and analyse data:

1. Responses to the completed questionnaires were recorded on an MS Excel spreadsheet first as part of the data cleaning process
2. Once that was done, the Statistical Packages for Social Sciences (SPSS) was used to analyse data.

3.3.5.2 Research data and information analysis

Ellsberg & Heise (2005) define data analysis as the process of cleansing, synthesising, and extracting meanings from raw data from the research. This research is utilised a

quantitative research strategy thus SPSS was used to analyse the data. For the purpose of this study, the following statistical measures were used:

1. **Sample description** – the first step of data analysis was to describe the characteristics of the sample. This was aimed at assessing the validity of the responses provided. Where possible, descriptive statistics were used (for example, to describe tenure).
2. **Descriptive statistics** – mean and standard deviation were calculated on all numerical data (responses per instrument item in the digitalisation and negotiation instruments)
3. **Correlation** – the Pearson's correlation coefficient was used to measure effect of digitalisation on negotiation
4. **Linear regression modelling** – the final step of data analysis was linear regression analysis. This was aimed at assessing the extent to which digitalisation can predict the level of negotiation

Both the regression model and Pearson's correlation coefficient were tested for statistical significance using the p value. According to Keller (2015), a p value of less than or equal to 0.05 shows statistical significance of the observed relationship.

3.3.6 Description of the research respondents

In this study, the following demographic items were used to authenticate research participants:

- **Age and work experience at the KwaZulu Natal public health department** – this was used to assess the level of maturity and the depth of understanding of the research phenomenon under investigation
- **Education level** – this item was used to assess respondents' academic familiarity with the various aspects of negotiation and digitalisation
- **Job title and position** – this item was used to stratify respondents and ensure that the researcher survey respondents from the stratum identified under the sampling section

3.4 Research strengths – reliability and validity measures applied

According to Creswell (2013), validity is the extent to which a test measures what it is supposed to measure. As already noted above, demographic information such as age and tenure were used to judge the validity of responses given by respondents. In addition, research instruments were tested for reliability. According to Wadkar, Singh, Chakravarty & Argade (2016), the Cronbach's alpha is used to measure the reliability of instruments in quantitative studies. In this study, the alpha was used to measure the reliability of instruments used. According to Heale and Twycross (2015), an alpha of at least 0.70 means that the instrument is a reliable measure of the construct that it purports to measure.

The research pilot tested the data collection instruments to assess their reliability. That was done as follows:

- 10 participants were selected and sent the research instrument to fill in
- The responses were recorded on a spreadsheet
- The Cronbach's Alpha was calculated for each item and for the instrument as a whole to test the reliability of the instrument.
- Items with a Cronbach's Alpha of less than 0.60 were excluded from the instrument.

Pilot testing of the research instrument ensured that the designing of the instrument was precise and effective to answer the research questions. The researcher used a multi-stage sampling to increase the issue of randomisation and reduce bias in the study, beginning with the selecting of participants in the pilot study. A study by Acatech (2016) which focused on understanding the impact of digitalisation on employment relations used this method of sampling to enhance rigour and validity. Validity of the findings was also enhanced through refining of the objectives and the research questions based on the results of the pilot study.

3.5 Research weaknesses—technical and administrative limitations

This study used a self-reporting instrument, in which respondents recorded their perceptions on questionnaire instruments. There is a risk that respondents may have presented biased information to avoid embarrassment if they feel that their views are somehow embarrassing. To mitigate this, the instrument did not collect any identification information and respondents were assured of anonymity of their views.

As already indicated above, this study adopted a cross-sectional design. In such a study, data on exposure (e.g. to digitalisation) and outcome (changes in negotiations) is collected at the same time. Non-response of some respondents may distort the relationship between exposure and outcomes if those who do not respond have different characteristics from those that do. As a result, a stratified sampling technique was used to ensure that responses were collected from all levels of the organisation.

4 PRESENTATION OF RESEARCH RESULTS

This chapter presents the results of the study in five parts. Firstly, the results on the analysis of the sample are presented. Various aspects of the sample characteristics are discussed, including gender and years of experience. Secondly, the reliability of the research instrument is also assessed, followed by the presentation of descriptive statistics. Finally, results of regression and correlation analyses are also presented.

4.1 Sample analysis

The sample of this study was drawn from the KwaZulu Natal Department of Health (KZN DOH) which has a target population of approximately 160 employees. The target sample for this study was 60 participants. However, of the various questionnaires that were sent out, only 43 were returned.

4.1.1 Gender

Gender statistics were necessary to assess the extent to which the sample was representative of the gender composition in the sample. Figure 4.1 shows the results of gender statistical analysis.

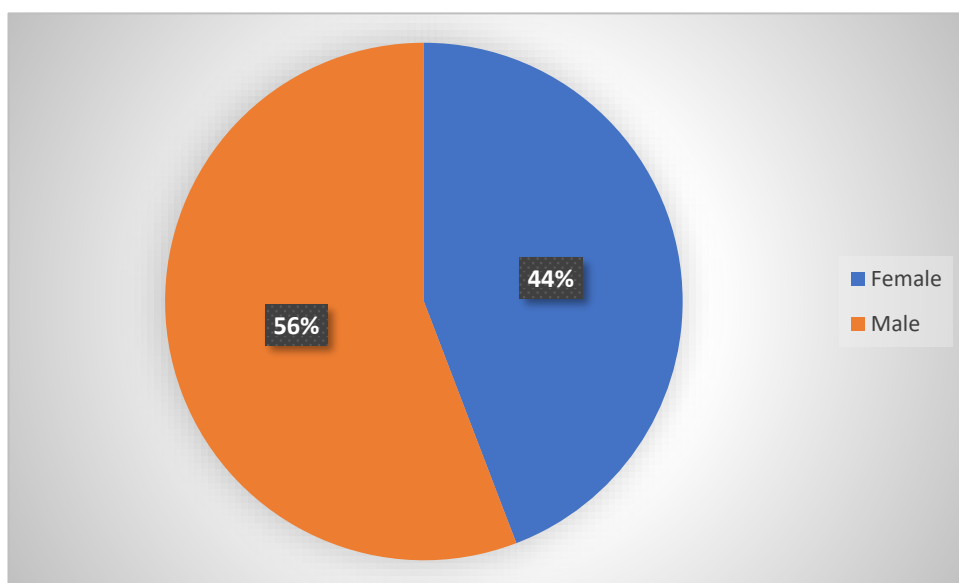


Figure 1: Gender Statistics

The pie chart above shows that there were more males (56%) than females (44%).

4.1.2 Level of education

The level of education was solicited from participants to assess the overall knowledge of participants on issues relating to digitalisation and negotiations. The following graph shows the results of the study with respect to the participants' level of education.

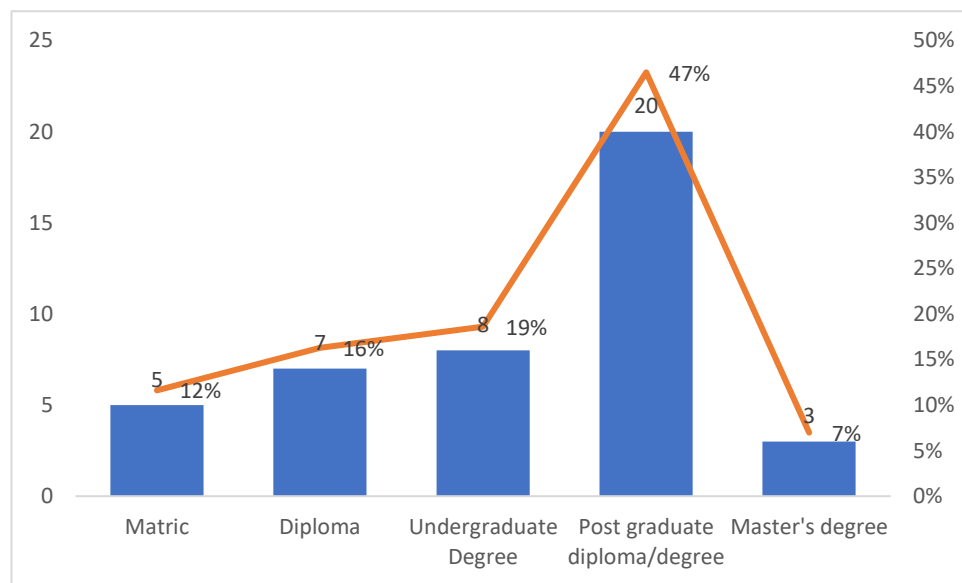


Figure 2: Participants' Level of Education

The results show that majority of the participants (54% or 23 participants) had either a post-graduate diploma and/or post-graduate degree. More importantly, 88% of the participants had a qualification higher than matric.

4.1.3 Age and Years of Experience

Data on age and years of experience were collected to better assess the participants' level of maturity and their understanding of the various aspects of negotiation and digitalisation asked in this study. Figure 4.3 illustrates the results of the analysis of age data.

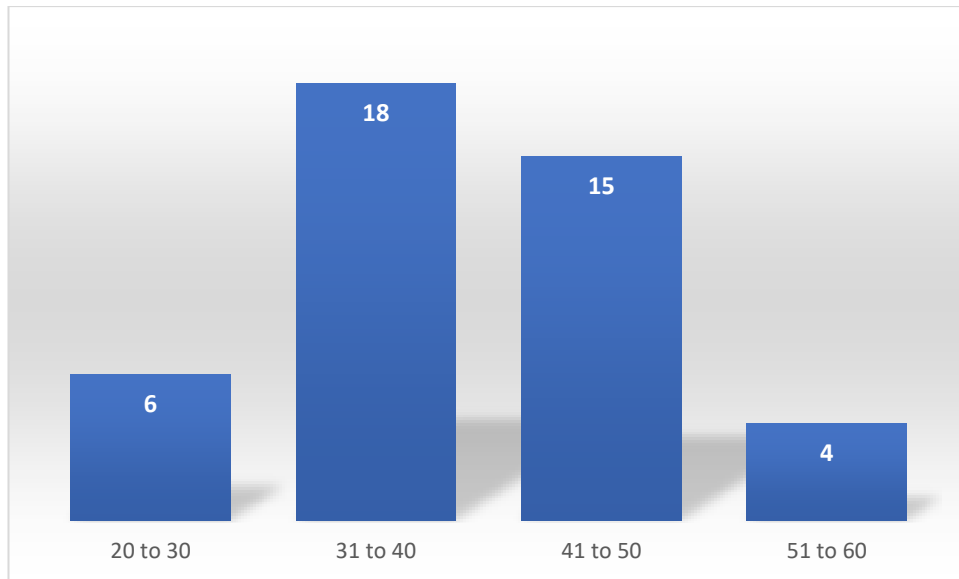


Figure 3: Participants' age

Majority of the participants were either young adults (31 to 40 years old) or adults (41 to 50 years old). Only 6 participants were youthful (20 to 30 years). To better understand the sample distribution, mean and standard deviation were calculated. It was found that the mean age of participants was 39.98 years (SD = 10.30 years).

4.1.4 Years of experience

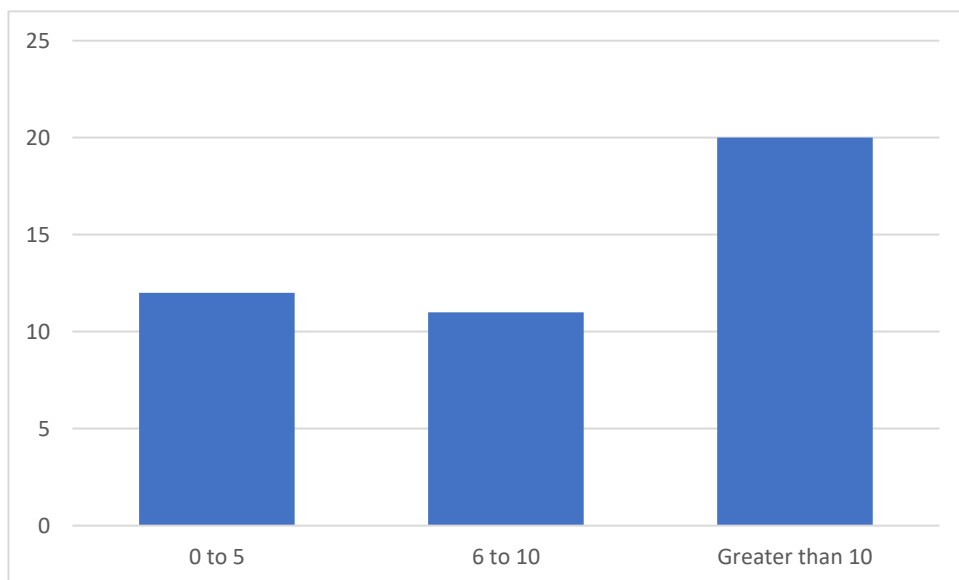


Figure 4: Participants' Years of Experience

Majority of participants had been with the KZN DOH for more than 5 years. The mean years of experience was 10.3 years (SD = 6.08 years). In fact, the latest employee to be employed by the KZN DOH had 2 years of experience with the organisation.

4.2 Instrument Reliability

It was noted in Chapter 3 that the instrument used in this study was self-developed. As a result, it was necessary to test its reliability. The Cronbach's alpha coefficient was used to assess instrument reliability. Table 4.1 presents results of reliability testing for the two instruments used in this study, namely *Digitalisation Instrument* and the *Negotiation Instrument*.

Table 1: Cronbach's alpha coefficient

	Mean	SD	Range	Cronbach's Alpha
	Digitalisation Instrument			
	4.14	.25	1 to 5	.67
	Negotiation Instrument			
Factor 1	Level of changes in negotiation			
	3.99	1.28	1 to 5	.70
Factor 2	Continuing value of traditional negotiation principles			
	4.14	.25	1 to 5	.70
	Full Instrument			
	4.03	1.01	1 to 5	.85

Quoting Heale and Twycross (2015) in Chapter 3, it was concluded that an alpha of at least .70 means that the instrument is a reliable measure of the construct that it purports to measure.

4.3 Descriptive statistics

The state of each variable was assessed through descriptive statistics. More specifically, the state of both digitalisation and negotiation in the KZN DOH were assessed through mean and standard deviation of scores.

4.3.1 Digitalisation in KZN Department of Health

This section of the study presents descriptive statistics relating to the Digitalisation Instrument. The descriptive statistics is shown in the table below.

Table 2: Level of Digitalisation

Item	Max	Min	Mean	SD
1. Digitalisation has changed the way your organisation create value for its stakeholders (customers/clients, suppliers, communities etc.)	5	1	4.37	0.82
2. Digitalisation has increased competition for resource allocation in my workplace	5	1	3.91	1.02
3. Digitalisation has resulted in the development of new ways of providing service to clients in my workplace	5	2	4.42	0.73
4. Because of digitalisation, my performance has improved	5	1	3.98	1.01

5. The rate of technology change is so fast that it is difficult to be updated on all new technologies that I use in the workplace	5	2	3.77	1.15
6. My colleagues have often taken advantage of digitalisation to create new services for clients	5	2	4.02	0.86
7. Our department uses digital technologies to communicate with clients	5	2	4.28	0.63
8. In our department, we use digital technology to store and retrieve data	5	2	4.35	0.72

From the table, it is clear that the level of digitalisation was generally high in the KZN DOH, with the mean scores of all items used being larger than three. In addition, there was general consensus regarding items 1 (Digitalisation has changed the way your organisation create value for its stakeholders (customers/clients, suppliers, communities etc.)), Item 3 (Digitalisation has resulted in the development of new ways of providing service to clients in my workplace), Item 6 (My colleagues have often taken advantage of digitalisation to create new services for clients), Item 7 (Our department uses digital technologies to communicate with clients) and Item 8 (In our department, we use digital technology to store and retrieve data). These items had standard deviations which were below 1, reflecting that, in general, participants agreed on the issues raised in those items. Item 1 (Digitalisation has changed the way your organisation create value for its stakeholders (customers/clients, suppliers, communities etc.)) had the highest mean score of 4.37 (SD = .82).

4.3.2 Level of changes in negotiation

In this section the descriptive statistics from the second instrument are presented. The instrument asked questions on the level of negotiations and the accompanying level of change in the KZN DOH. The results of the study are presented in the table below.

Table 3: The level of negotiations

Item	Max	Min	Mean	SD
Level of changes in negotiation				
Digitalisation has significantly changed the following dimensions of negotiations:				
1. The process one has to go through in negotiations	5	2	4.16	0.84
2. The substance or reasons why people engage in negotiations	5	1	3.40	1.29
3. The relationship between negotiators	5	1	3.81	1.03
4. The time taken to complete negotiations	5	1	4.28	0.83
5. The place at which negotiations take place	5	1	4.28	0.98
Continuing value of traditional negotiation principles				
6. In light of digitalisation, rate the continuing value of each of the following dimensions of negotiation process				
6.1.The process one has to go through in negotiations	5	1	3.98	0.96
6.2.The substance or reasons why people engage in negotiations	5	1	4.12	1.10
6.3.The relationship between negotiators	5	2	3.95	1.00
6.4.The time taken to complete negotiations	5	1	3.91	1.11
6.5.The place at which negotiations take place	5	1	3.65	1.29

Like in the previous instrument, the generally, mean scores for this instrument were high, ranging between 3.4 and 4.28. Very high significant changes in the negotiation process were recorded for time to negotiate (Mean = 4.28, SD = .83) and place at which negotiations take place (Mean = 4.28, SD = .98). Respondents were less in agreement as to how digitalisation changed the substance or reasons for negotiations and the relationship between the negotiators as can be seen from high standard deviations for Item 6 (SD = 1.29) and Item 4 (SD = 1.03).

In addition, respondents generally agreed that the process one follows when negotiating still has value (Mean = 3.98, SD = .96), as well as understanding the substance or reasons why people engage in negotiations (Mean = 4.12, SD = 1.10).

4.4 Correlation analysis

As explained in Chapter 3, the Pearson's Correlation coefficient (r) was used to evaluate collinearity of the variables and factors of the study.

Table 4: Correlation Matrix

	1	2	3	4
1. Dig_tot	--			
2. Negcha_tot	.55**	--		
3. Negval_tot	.56**	.72**	--	
4. Neg_tot	.60**	.92**	.93**	--

**Correlation is significant at the 0.01 level (2-tailed).

Dig_tot = Digitalisations; Negcha_tot = Changes in negotiations; Negval_tot = Continuing value of traditional negotiation principles, Neg_tot = Negotiation variable

Correlations were calculated for four variables, namely Digitalisation, Changes in negotiations, Continuing value of traditional negotiation principles and the overall negotiation variable. For all the correlations, 2-tailed significance levels were also calculated. What is clear from the table above is that all the four variables were positively correlated. More importantly, digitalisation was found to have a large positive effect ($r > .20$ as discussed in Chapter 3) on both changes in negotiations and the continuing value of the principles of negotiation. All correlations were statistically significant ($p\text{-value} < .01$).

4.5 The influence of Digitalisation on Negotiation

The final step of data analysis was to develop a regression model which could be used to predict the level of changes in negotiations for given levels of digitalisation. The model is presented in the table below.

Table 5: Impact of Digitalisation on Negotiation

Model Summary					
Model	R				Change Statistics

		R Square	Adj. R Square	Std. Error of Est.	R Square Change	F Change	df1	df2	Sig. F Change
1	.548 ^a	.300	.283	2.889	.300	17.57	1	42	.00
a. Predictors: (Constant), Digitalisation									

The model developed in this study was on the influence of digitalisation on negotiations. The model shows that 30% of variations in Negotiation can be explained by changes in Digitalisation (R square = .300, $p < .01$). Thus, digitalisation was found to have a large predictive value on negotiations (R Square > .20).

4.6 Summary

This chapter has presented the results of the study in five parts. Firstly, the results of the analysis of the sample have been presented. Various aspects of the sample characteristics have been discussed, including gender and years of experience. Secondly, the reliability of the research instrument has also been assessed, followed by the presentation of descriptive statistics. Finally, results of regression and correlation analyses were also presented in this chapter.

5 THE DISCUSSION OF RESEARCH FINDINGS

5.1 Introduction

This chapter discusses the results of the study. This Chapter will begin with the discussion of the results on the analysis of the sample. The suitability of the research instrument to measure the phenomenon under investigation will then be discussed. Finally, results of regression and correlation analyses are also discussed.

5.2 Sample analysis

As indicated in the previous chapter, the response rate in this study was 72% of the target. As a result, that response rate was well above the average of 50% reported by Mwiti et al. (2019). In addition, the number of responses were above the 30 threshold which was recommended by Islam (2018). As a result, the sample was large enough to conduct quantitative analyses as recommended by Islam (2018) and Keller (2015).

The labour force at the KZN DOH consists of more males (51%) than females (49%). The sample of this study was therefore, generally in line with the target population given that the sample consisted of more males (56%) and less females (44%). As a result, it can be concluded that the sample was representative of the KZN DOH's employee population.

Generally, the work within the KZN DOH is technical and requires one to have some form of post-secondary education. The sample of this study had majority of the participants (47% or 20 participants) had either a post-graduate diploma and/or post-graduate degree. More importantly, 88% of the participants had a qualification higher than matric. It can therefore be concluded that participants were educated enough and had the level of education which would have been sufficient for them to understand what negotiations and digitalisation meant.

The results on age and years of experience showed that participants were old enough to provide valid insights into the various aspects of negotiation and digitalisation asked in this study and that participants had been with the organisation for long enough to understand how digitalisation and negotiation would have change over time.

5.3 Instrument reliability

Quoting Heale and Twycross (2015) in Chapter 3, it was concluded that an alpha of at least .70 means that the instrument is a reliable measure of the construct that it purports to measure. In addition, Ursachi, Horodnic and Zait (2015) indicated that while an alpha coefficient of .70 shows a highly reliable instrument, an instrument can still be judged as being reliable with an alpha coefficient of as low as .60 reliability. Chapter 4 showed that all the alpha coefficients for both instruments and the overall instrument were reliable. The reliability coefficients ranged between .67 and .85. It can therefore be concluded that the instruments used in this study to measure the variables were reliable.

5.4 Descriptive statistics

The state of each variable was assessed through descriptive statistics. More specifically, the state of both digitalisation and negotiation in the KZN DOH were assessed through mean and standard deviation of scores. This section discusses results of that analysis.

5.4.1 Digitalisation in the KwaZulu Natal Department of Health

The results of the study showed that participants generally agreed that digitalisation has changed the way their organisation (KZN DOH) created value for its stakeholders such as customers/clients, suppliers and communities, among other stakeholders. The low standard deviation for item one in the Digitalisation Instrument showed that there was general consensus among participants regarding the impact of Digitalisation on how the KZN DOH created value for its stakeholders. This change can be explained by the Individual Learning Theory which holds that social processes tend to change to accommodate and adapt to changes in the environment (Schuh, Gartzen, Rodenhauser, & Marks, 2015). Thus, it is should be expected that the way the KZN DOH created value for its stakeholders changed with time, given the increase in the levels of digitalisation – a part of the social environment.

In addition, participants' responses showed that digitalisation had increased competition for resource allocation in KZN DOH. While Kaplan (2019) explains that digitalisation increased competition in the private sector, the nature of competition in the public sector such as KZN DOH is different. For the KZN DOH, competition is centred around resources which each public sector organisation should be allocated by the budgetary council. Thus, due to digitalisation and other factors such as COVID-19 which have led to constrained budgets, the level of competition for resources has increased in the public sector. That was confirmed by the results of the study as could be seen from the high mean score for Item 2 (Digitalisation has increased competition for resource allocation in my workplace).

In addition, digitalisation has significantly changed organisational processes at the KZN DOH as could be seen from the high mean score of Item 3 (Digitalisation has resulted in the development of new ways of providing service to clients in my workplace). For instance, while most of the consultations and seminars are still being done physically, some are now being done digitally. According to Heald (2020), digitalisation has significantly changed some of the traditional business processes. That proposition is supported by the results of the study given that majority of the participants strongly agreed to the statement in Item 3.

The results of the study showed that generally, participants agreed that because of digitalisation, their performance had improved. However, technology, in the form of digitalisation, has brought about some challenges for organisations. For example, in the current study, participants agreed that the rate of technology change was so fast that it was difficult to be updated on all new technologies that were used in the workplace. This was identified by Kotler et al. (2015) who indicated that the fast-changing business environment requires constant updating of organisational stakeholders so that their buy-in is evaluated continuously.

Encouragingly, the mean score of Item 6 (My colleagues have often taken advantage of digitalisation to create new services for clients) was high. Thus, while digitalisation has brought about high levels of competition on resources, it has also provided organisations with new avenues for developing new products. This supports the propositions by Bouwman, de Reuver and Nikou (2017) who indicated that digitalisation has increased the levels of innovation in businesses and has significantly reduced the cost of new product development.

Within the KZN DOH, digital technologies were used for a number of purposes. For instance, participants agreed that their departments used digital technologies to communicate with clients (Mean = 4.28, SD = .63). Again, digitalisation was also used in the KZN DOH to store and retrieve data about clients. This, has therefore provided opportunities of having permanent and readily available documentary evidence for patients.

Overall, the level of digitalisation was found to be very high within the PDHK, with a mean score of over 4 out of 5. In addition, these findings were shared by the majority of the participants as could be seen from the low standard deviations, all of which were less than 2.

5.4.2 Level of changes in negotiation

In this section the descriptive statistics from the second instrument are discussed. The instrument asked questions on the level of negotiations and the accompanying level of change in the KZN DOH. The first question in this section asked the extent to which digitalisation had significantly changed each of the dimensions of negotiations, namely process, substance/reason, relationship between negotiators, time and place of negotiation. Except for the question on the relationship between negotiators and the reason or substance of negotiations, all the other dimensions of negotiations had mean scores which were above 4. That means that in general, participants felt that digitalisation had significantly changed the process of negotiation, the time and place of negotiations. These findings are in line with the propositions by Heald (2020) who indicated that technological development have significantly changed the various dimensions of negotiations. Of note, due to digitalisation, negotiations can now be done electronically, significantly changing the place at which negotiations can take place.

Overall, the results of the study showed that digitalisation had significantly changed three of the six dimensions of negotiations. It is understandable that the substance of negotiations has remained relatively the same. This is because, whether negotiations are done electronically or physically, the purpose of such negotiations remain the same.

5.4.3 Continuing value of traditional negotiation principles

It was argued in Chapter 2, that negotiations permeate through all the aspects of Porter's (2008) Value Chain. Therefore, it was necessary to find out whether each of the various

dimensions of negotiation was still of value within the Porter's (2008) Value Chain. The question asked: In light of digitalisation, rate the continuing value of each of the following dimensions of negotiation process. In support of the results above, the substance or reasons for negotiations had the highest mean score (Mean = 4.12, SD = 1.10). In other words, participants still felt that in spite of digitalisation, negotiators' reasons for negotiations remained relatively the same. In other words, it was still important for participants to have a purpose of negotiation in their mind before the actual negotiation. Such a purpose would then be maintained whether negotiations are done electronically or physically.

The place of negotiation had the lowest mean of 3.64 (SD = 1.29). Even though the mean score was above half (2.5), the fact that this was the lowest shows that participants generally thought that the place of negotiation is of least continuing value of the given dimensions of negotiations.

Overall, the dimensions of negotiations were found to still have value in organisations. In other words, even though digitalisation had changed some of them significantly, they still remained relevant to negotiators.

5.5 Correlation analysis

As explained in Chapter 3, the Pearson's Correlation coefficient (r) was used to evaluate collinearity of the variables and factors of the study. Correlations were calculated for four variables, namely Digitalisation, Changes in negotiations, Continuing value of traditional negotiation principles and the overall negotiation variable.

The results of the study showed that all correlations were positive and were statistically significant at $p < .01$. In addition, all correlations were large ($r > .20$). Digitalisation was found to positively correlate to negotiation ($r = .60$, $p < .01$). This shows that changes in digitalisation were changing in the same direction as those of negotiations. While this does not guarantee a cause-effect relationship between digitalisation and negotiations, the results of correlation analysis point to the possibility of digitalisation influencing negotiations. The next section analyses the extent to which negotiations can be influenced by digitalisation.

5.6 The influence of Digitalisation on Negotiation

The final step of data analysis was to develop a regression model which could be used to predict the level of changes in negotiations for given levels of digitalisation. The regression model was used to test the hypothesis: Digitalisation has no influence on negotiations. Thus, the model in this section looked at the extent to which digitalisation could be used to predict negotiation.

The regression model developed in this study showed that 30% of variations in negotiations could be explained by variations in Digitalisation ($R^2 = .30$, $p < .01$). In other words, Digitalisation was found to have a large predictive value in the model. These findings are in line with propositions by previous authors such as Cummins (2020), Fay and Ghadimi (2020), Heald (2020), Greenfield (2017), among others. These authors, all explained that digitalisation has had a significant positive impact on negotiation.

5.7 Summary

This chapter has discussed the results of this study. The sample of the study was found to be representative of the target population in the KZN DOH, while the research instruments used in the study were found to be reliable. Generally, both digitalisation and negotiations were found to be high within the KZN DOH. In addition, digitalisation was found to positively correlate with negotiations, pointing to the existence of a potential cause-effect relation between the two variables. Regression modelling revealed that 30% of variations in negotiations could be explained by variations in digitalisation. That relationship was found to be statistically significant and was in line with prior studies. The next Chapter concludes on the results and makes recommendations to the KZN DOH based on the findings.

6 SUMMARY, CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

6.1 Summary

This is the final chapter of the study. Its focus is on the conclusions as well as making recommendations to the KZN DOH on how to enhance the level and quality of negotiations in the face of digitalisation.

The aim of the study was to evaluate the influence of digitalisation on negotiation. This study revealed that digitalisation has significantly changed the way people negotiate, especially the place at which people negotiate.

6.2 Conclusion

6.2.1 Conclusion pertaining to whether the six principles of negotiations are still relevant in the current digital era

The first objective of this research was to evaluate the continuing relevance of the six principles of negotiations to the current organisational environment. As evidenced by the analysis of mean and standard deviation, while it was clear that all the principles of negotiations remained relevant, due to their high mean scores, participants agreed that the substance or reasons for negotiations remained important. They felt that in spite of digitalisation, negotiators' reasons for negotiations remained relatively the same. However, participants felt that the place of negotiation had the least continuing value in the face of digitalisation.

6.2.2 Conclusion pertaining to how digitalisation has influenced the traditional principles of negotiations

The second research objective was to assess how digitalisation has influenced traditional principles of negotiations in the KZN DOH. To achieve this research objective, a regression model was developed in which digitalisation (independent variable) was used to predict negotiation (dependent variable). The model showed that digitalisation had a

large effect on negotiations, with digitalisation accounting for 30% of the variations in negotiations. It can be concluded that changes in digitalisations have brought about changes in negotiations. Time of negotiations has changed in that one does not have to be physically present in a meeting to attend a meeting. Time taken preparing, travelling to and from a meeting, the actual time of the negotiations has totally changed because of digital platforms like Zoom and MS teams, allowing negotiators to be more flexible in terms of time.

6.2.3 Conclusion pertaining to opportunities brought about by digitalisation on negotiations

The third research objective was to assess whether there are any negotiation opportunities brought about by digitalisation. A high mean score for Item 2 on the research instrument confirmed that the level of competition for resources and budget allocation has increased in the digital era. The fact that participants showed that digitalisation had increased competition means that the department is open to new ways of doing business, which is supported by the open learning theory.

6.2.4 Conclusion pertaining to the challenges faced by the KZN DOH as a result of digital negotiations

The fourth research objective was to assess whether there are any challenges faced by KZN DOH and its stakeholders in negotiations as a result of digitalisation. Again, the need for negotiations were found to be high within the KZN DOH. Questions used to answer this research objective asked participants to assess the extent to which they thought negotiations changed due to digitalisation. Participants responded that the rate of change in digitalisation was so high implying that there may be challenges with some stakeholders in negotiating in the digital era.

6.2.5 Conclusion pertaining to the levels of digitalisation in the KZN DOH

The fifth objective of the study was to assess the level of digitalisation in the KZN DOH. The results of the study showed that digitalisation was generally high in the KZN DOH. That was inferred from the high mean scores of the items in the Digitalisation Instrument. In other words, there was general feelings among participants that the level of digitalisation was high within the organisation. These findings are in line with previous

authors such as Schwab (2016) who indicated that digitalisation has increased over the last few years.

6.3 Limitations of the study

Every effort was taken to ensure that this study was valid and that its findings added value to the KZN DOH. However, the study still had some limitations. Firstly, this study was purely quantitative. That means it was not possible to enquire into the reasons why participants would have rated a statement in the way they did. In future, researchers may need to adopt either a mixed methods or a qualitative design to deal with the limitations of a quantitative design.

In addition, the study was cross-sectional, meaning that responses were solicited at a particular point in time. That implies that whatever happened before or after the study could not be captured. In future, a longitudinal study would need to be adopted to account for changes in negotiation and digitalisation before and after the cross-sectional period.

6.4 Recommendations

The final objective was to make recommendations to the KZN DOH's management on how to improve negotiations in the face of digitalisation. The following recommendations can be made:

Digitalise negotiations – results of this study have shown that factors such as place of negotiations no longer hold significant relevance in the face of negotiations. Therefore, it is recommended that in order to enhance the quality and value of negotiations, the KZN DOH, where possible, needs to digitalise negotiations. For example, online platforms such as Zoom and Skype can be used to facilitate negotiations. This means that the KZN DOH needs to invest in these new technologies to assist employees to move towards digital forms of negotiations.

Re-evaluate the organisation's value chain – we have seen from Chapter 2 that the ultimate value offered to clients is created through value chain activities. However, results

of the study have shown that business processes such as negotiations have significantly changed due to digitalisation. Therefore, these value chain activities need to be re-evaluated to assess if they are still relevant to deliver value to the KZN DOH's stakeholders. The re-evaluation should cover, not only dimensions of negotiations, but all other facets of the organisation's value chain system.

Continuing employee development – it has been found in this study that employees felt overwhelmed by the pace at which technology changed. The KZN DOH needs to ensure that employees have a general grasp of the new technologies, particularly those which influence the quality of service delivered to clients. Thus, the KZN DOH can encourage employees to learn about these new technologies through provision of continuing professional development, focusing on these new technologies.

It should be emphasised that the recommendations in this section are not intended to be exhaustive. Rather, they only seek to provide the KZN DOH's management with avenues for evaluating new ways of enhancing the nature, level and quality of negotiations within the organisation.

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APPENDICES

Appendix 1.1: Data collection instrument

MEASUREMENT INSTRUMENT	
SECTION A: DEMOGRAPHIC INFORMATION	
<i>Answers the following questions about yourself</i>	<i>Response</i>
1. Please state your age	
2. Please state the number of years you have been working at your current employer	
3. Please state your gender	
4. Please state your current position in the organisation	
5. Please state your highest level of education	

SECTION B: DIGITALISATION INSTRUMENT	
<i>On a scale between 1 and 5, rate the following statements about your organisation. Use the following key to decide on your rating:</i> <i>1 = Strongly disagree</i> <i>2 = Disagree</i> <i>3 = Neither agree nor disagree</i> <i>4 = Agree</i> <i>5 = Strongly agree</i>	
<i>Statement</i>	<i>Response</i>

1. Digitalisation has changed the way your organisation creates value for its stakeholders (customers/clients, suppliers, communities etc.)	
2. Digitalisation has increased competition for resource allocation in my workplace	
3. Digitalisation has resulted in the development of new ways of providing service to clients in my workplace	
4. Because of digitalisation, my performance has improved	
5. The rate of technology change is so fast that it is difficult to be updated on all new technologies that I use in the workplace	
6. My colleagues have often taken advantage of digitalisation to create new services for clients	
7. Our department uses digital technologies to communicate with clients	
8. In our department, we use digital technology to store and retrieve data	
SECTION C: NEGOTIATION INSTRUMENT	
<i>On a scale between 1 and 5, rate the following statements about your organisation. Use the following key to decide on your rating:</i> <i>1 = Strongly disagree</i> <i>2 = Disagree</i> <i>3 = Neither agree nor disagree</i> <i>4 = Agree</i> <i>5 = Strongly agree</i>	
Statement	Response

Negotiation process Digitalisation has significantly changed the following dimensions of negotiations	
1. The process one has to go through in negotiations	
2. The substance or reasons why people engage in negotiations	
3. The relationship between negotiators	
4. The time taken to complete negotiations	
5. The place at which negotiations take place	
6. In light of digitalisation, rate the continuing value of each of the following dimensions of negotiation process <i>Use a scale between 1 and 5 in your rating, where:</i> <i>1 = extremely unimportant</i> <i>2 = unimportant</i> <i>3 = Neither important nor unimportant</i> <i>4 = important</i> <i>5 = extremely important</i>	
6.1. The process one has to go through in negotiations	
6.2. The substance or reasons why people engage in negotiations	
6.3. The relationship between negotiators	
6.4. The time taken to complete negotiations	
6.5. The place at which negotiations take place	

Thank you

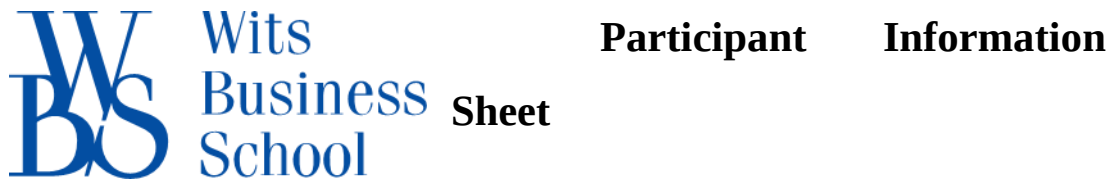
Appendix 2.1: One-page bio of the researcher including declaration of interest in the research and funders, if any

I am a 39-year-old medical doctor who is currently based in Jozini, northern KZN. I graduated with MBBCH from Wits University in July 2011. I served my compulsory internship at King Edward VIII hospital in Durban between 2011 and 2013. I then did my completed my community service in Ngwavuma, rural KZN in the middle of 2014. I then identified a gap in the provision private health care in rural areas, particularly rural KZN. After my community service I left Ngwavuma and went to Ngwelezana hospital which is a tertiary hospital to further hone my clinical skills and to save money while preparing to start a private health care center in northern KZN.

I spent about 18 months at Ngwelezana Hospital, until I had enough capital and courage to open a private health care center in Jozini. The medical practice opened its doors on 02 January 2016 and it has been growing ever since. I have also managed to diversify into emergency health services and property space. I believe this MBA will help me better analyse industries that I can venture into and also help me manage my businesses better.

This research was not funded by anyone so I have no declarations to make.

Appendix 2.2: Participant information sheet



Dear Sir / Madam,

My name is Sandile Mbonambi and I am a Masters student in Business Administration at the University of the Witwatersrand, Johannesburg. As part of my studies, I have to undertake a research project, and I am investigating the influence of digitalization on negotiations under the supervision of Mr Patrick Zhuawo. The aim of this research project is to find out if time, place and process of negotiation have changed as a result of digitalization.

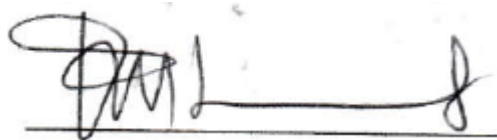
As part of this project, I would like to invite you to take part in answering a questionnaire. This activity will involve completing an online survey and will take around ten minutes.

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you do not want to. The questionnaire will be completely confidential and anonymous as I will not be asking for your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else. I will be using a pseudonym (false name) to represent your participation in my final research report. If you experience

any distress or discomfort at any point in this process, we will stop the interview or resume another time.

If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report, I will be happy to send it to you. If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrec-medical.researchoffice@wits.ac.za

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Sandile Mbonambi', written over a horizontal line.

Researcher:

Sandile Mbonambi, 0101605E@students.wits.ac.za, 0836911425

Supervisor:

Mr Patrick Zhuwao, 3310780@students.wits.ac.za, 0623062312

Appendix 2.3: Informed consent

Dear participant

My name is Sandile Mbonambi and I am currently completing my Master's studies with the University of Witwatersrand. As part of my studies, I am required to complete an independent research on a subject area of my choice. I have chosen to investigate the influence of digitalisation on negotiation due to of Coronavirus 2019 (COVID-19). To complete the research, I am supposed to conduct a survey on the subject. I therefore, invite you to help me complete my studies by agreeing to answer the survey questions attached in this consent letter.

Should you wish to accept this invitation, you should be aware that you give your consent to:

- Allow me to use the data you provide for the purpose of this study only. No part of the data you provide will be used for any other purposes
- That I share the findings from analysed data to my supervisor and the university as and when required by the university as part of my Master's studies.
- I keep the data you provide for one year and required by the university research guidelines
- You will not add any personal identification on this on the survey or consent forms. The data you provide will be used as part of pooled data from other participant and only pseudonyms will be used in this study to refer to you and other participants.
- That your participation in this study is voluntary and that you expect no form of reward for taking part in the research.
- That you can withdraw your consent at any stage of the research except after the data has been analysed. At this stage, it will not be possible to identify the data you provide and withdrawal of consent will no longer be possible.

For further information about the research, please contact me on:

Email: 0101605e@students.wits.ac.za and vanakzn@yahoo.com

Cell: 0836911425

You can also obtain clarity on the study from the University's Research Office or my research supervisor.

Email: 331780@students.wits.ac.za

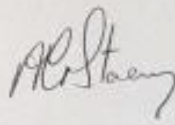
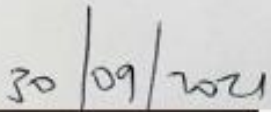
Cell: 0623062312

Your acceptance of this invitation will go a long way towards assisting me to complete my studies.

Researcher

Name: Sandile Surname: Mbonambi

Appendix 2.4: Ethical Clearance Certificate

Graduate School of Business Administration University of the Witwatersrand, Johannesburg		  Wits Business School
Wits Business School Ethics Committee WITS BUSINESS SCHOOL ETHICS COMMITTEE Constituted under the University Human Research Ethics Committee (Non-Medical)		
Ethics Clearance Certificate		
Ethics protocol number:	WBS/BA0101605e/699	
<i>This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).</i>		
This certificate is only valid if accompanied by formal permission from the relevant stakeholder(s).		
Project title	The impact of fourth industrial revolutions' digital influence on negotiation in South Africa.	
Investigator / Researcher	Dr Sandile Mbonambi	
Nature of Project	MBA (Research Article)	
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.	
Issue Date of Certificate	2021-09-23	
Expiry date	Date of submission of the project report	
Chairperson	Prof Anthony Stacey ☎ +27 11 717 3587 ☎ +27 82 880 4531 ✉ anthony.stacey@wits.ac.za	
		
Declaration by Researcher		
<i>One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.</i>		
I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.		
 		

Appendix 3.1: Dully filled in data collection instrument(s)

MEASUREMENT INSTRUMENT	
SECTION A: DEMOGRAPHIC INFORMATION	
<i>Answers the following questions about yourself</i>	Response
6. Please state your age	39 years
7. Please state the number of years you have been working at your current employer	11 years
8. Please state your gender	Male
9. Please state your current position in the organisation	Director
10. Please state your highest level of education	Postgraduate Masters

SECTION B: DIGITALISATION INSTRUMENT
<i>On a scale between 1 and 5, rate the following statements about your organisation. Use the following key to decide on your rating:</i> <i>1 = Strongly disagree</i> <i>2 = Disagree</i> <i>3 = Neither agree nor disagree</i> <i>4 = Agree</i> <i>5 = Strongly agree</i>

<i>Statement</i>	<i>Response</i>
9. Digitalisation has changed the way your organisation creates value for its stakeholders (customers/clients, suppliers, communities etc.)	5
10. Digitalisation has increased competition for resource allocation in my workplace	4
11. Digitalisation has resulted in the development of new ways of providing service to clients in my workplace	4
12. Because of digitalisation, my performance has improved	3
13. The rate of technology change is so fast that it is difficult to be updated on all new technologies that I use in the workplace	4
14. My colleagues have often taken advantage of digitalisation to create new services for clients	4
15. Our department uses digital technologies to communicate with clients	5
16. In our department, we use digital technology to store and retrieve data	5
SECTION C: NEGOTIATION INSTRUMENT	
<i>On a scale between 1 and 5, rate the following statements about your organisation. Use the following key to decide on your rating:</i> <i>1 = Strongly disagree</i> <i>2 = Disagree</i> <i>3 = Neither agree nor disagree</i> <i>4 = Agree</i> <i>5 = Strongly agree</i>	

<i>Statement</i>	<i>Response</i>
Negotiation process Digitalisation has significantly changed the following dimensions of negotiations	
7. The process one has to go through in negotiations	3
8. The substance or reasons why people engage in negotiations	1
9. The relationship between negotiators	2
10. The time taken to complete negotiations	5
11. The place at which negotiations take place	5
12. In light of digitalisation, rate the continuing value of each of the following dimensions of negotiation process <i>Use a scale between 1 and 5 in your rating, where:</i> <i>1 = extremely unimportant</i> <i>2 = unimportant</i> <i>3 = Neither important nor unimportant</i> <i>4 = important</i> <i>5 = extremely important</i>	
12.1. The process one has to go through in negotiations	4
12.2. The substance or reasons why people engage in negotiations	5
12.3. The relationship between negotiators	3
12.4. The time taken to complete negotiations	2
12.5. The place at which negotiations take place	1

Thank you