AN INVESTIGATION INTO THE ROLE OF RESKILLING PROGRAMMES ON THE DIGITAL TRANSFORMATION AT A LARGE FINANCIAL SERVICES ORGANISATION

by

Theodore Silvanus Aaron

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Supervisor: Dr Tinaye Mahohoma

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DECLARATION OF AUTHENTICITY

I declare that the research project, ***An investigation into the role of reskilling programmes on the digital transformation at a large financial services organisation***, is my own work and that each source of information used has been acknowledged by means of a complete Harvard Referencing System. This dissertation has not been submitted before for any other research project, degree, or examination at any university.

T. S. Aaron

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(Signature of student)

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(Date)

Johannesburg, South Africa

. . . ., <Country>

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ABSTRACT

The primary goal of this study was to examine the role of reskilling programmes on digital transformation at a Large Financial Services Organisation. The business climate and the world of work are going through an unprecedented large-scale transition - such as the transition from the agricultural economy to the industrial revolution. The era of digitisation, automation and acceleration is upon us. We are in an economy where new critical skills have emerged and these new emerging skills have become necessary for individuals, businesses, and the economy to succeed. However, very little research has been done on the role of reskilling programmes on the digital transformation at a Large Financial Services Organisation.

The study employed quantitative research and a structured closed questionnaire was used to collect field data from a selected sample of 88 respondents drawn from a target population in the study area. The field data were analysed using the Statistical Package for Social Sciences (SPSS), version 28. Statistical tools, including frequency tables, pie charts, and graphs, were used to analyse data in chapter four. The study findings indicate that jobs have been significantly affected by digital transformation and new emerging job functions in large financial services organisations. A digital transformation programme had a direct relationship with the implementation of reskilling programmes.

The study recommended that designing technology-focused training programmes appropriately and selecting or creating technology-focused training programmes with essential elements are necessary for successful outcomes.

Key words: Digital transformation, Large Financial Services Organisation, Jobs, Reskilling

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LIST OF ACRONYMS

AI-Artificial Intelligence

DT-Digital Transformation

IoT-Internet of Things

IT-Information Technology

SPSS- Statistical Package for the Social Sciences

CHAPTER ONE

OVERVIEW OF THE STUDY

1.1 Introduction

The business environment and world of work is going through unprecedented large-scale transition - like the transition that was experienced from the agricultural economy to the industrial revolution. The age of digitalisation, automation, and acceleration is upon us. We are in an economy where new critical skills have emerged and these new emerging skills have become imperative for individuals, businesses, and the economy to succeed (Palmer & Blake, 2018). At the current rate of business acceleration and transformation, about half of the Standard & Poor's 500 companies will become redundant and be replaced in the next 10 years and the companies that fail to place digital disruption, retraining and upskilling their workforce at the forefront of their business strategy will be part of that churn (Insights, 2018). Machine learning, artificial intelligence and other technologies have gained popularity in recent years among banking institutions and other financial services providers due to their potential to enhance strategic decision-making, continuous analytics capability improvement, and automation of business processes for services like customer loaning, fraud activity detection, compliance and policies, and client service (Agarwal, 2019).

This chapter presents an overview of the study and outlines its background, research problem and aim and objectives. The rest of the chapter deals with the research methodology and design adopted for this study, as well as the structure of this dissertation.

1.2 Background information

In the modern business environment, reskilling programmes have become increasingly important for organisations undergoing digital transformation (Hossain & Wigand, 2020). These programmes help employees develop the necessary technical, digital, and analytical skills required to work with new technology and data systems. Within the financial services industry, reskilling programmes are particularly critical

due to the need for real-time data processing and analysis, improved customer experience, and regulatory compliance (Lee & Hwang, 2020).

Reskilling programmes play a significant role in enabling organisations to implement digital transformation effectively. They help bridge the skills gap within the organisation, providing employees with the required knowledge and skills to use new technologies and tools (Bughin *et al*., 2018). Additionally, these programmes foster a culture of continuous learning, where employees are encouraged to continually update their skills and knowledge to keep up with technological advancements (Ganesan & Karthick, 2020).

According to McKinsey and Company (2018), reskilling programmes also positively impact employee retention and engagement. When employees feel that their skills are being developed, they are more likely to be committed and satisfied with their job, leading to increased productivity and better business outcomes. Furthermore, reskilling programmes can help address talent shortages in the digital domain by preparing current employees for new roles and requirements (Bughin *et al*., 2018).

The need for reskilling programmes is further highlighted by the World Economic Forum (2020), stating that digitisation, automation, and artificial intelligence are reshaping the growth of entire organisations, making it impossible to slow the pace of technological advancement. Hence, organisations must invest in reskilling and upskilling initiatives to remain competitive in the market (Sasmita & Kumar, 2018).

Companies that are proactive in reskilling their workforce view it as part of their digital transformation strategy (Palmer & Blake, 2018). However, reskilling initiatives need to be business-owned and enabled by the learning and development capability within the organisation. Unfortunately, the COVID-19 pandemic has impacted learning metrics, showing a decline in a few key areas (CIPD, 2021).

It is critical for individuals to take personal responsibility for their professional development to close skills gaps and master specialised capabilities (Palmer & Blake, 2018). While reskilling programmes are essential in building a skilled workforce, individuals need to be self-directed life-long learners for a company to stay genuinely competitive.

The role of reskilling programmes in digital transformation is critical for large financial services organisations. They help bridge the skills gap within the organisation and build a skilled workforce that can adapt to new technologies and tools, leading to improved customer experience, regulatory compliance, and business outcomes. Reskilling programmes also help address talent shortages in the digital domain, positively impacting employee retention and engagement. While organisations must invest in reskilling and upskilling initiatives to remain competitive, individuals must also take personal responsibility for their professional development.

1.3 Problem statement

Globalisation and rapid business transformation have resulted in technological advances and fast-paced innovation giving rise to various products, services and job functions that did not exist previously (International Labour Office, 2010). South Africa faces enormous socioeconomic challenges, many of which are directly related to the country's high unemployment rate. According to the Quarterly Labour Force Survey, the unemployment rate was around 33.9%% in the third quarter of 2022. Furthermore, income inequality and poverty are prevalent in South Africa, with approximately 57% of South Africans living in absolute poverty (eThekwini Municipality, 2019).

Due to these rapid shifts, organisations like the large financial services organisation realised the need for reskilling programmes in the workforce. Employee's knowledge and skills are vital to the innovativeness, performance, and competitiveness of the organisation. If there are advances and developments on the technology landscape, reskilling will continue to be a critical investment and therefore careful strategic analysis on the role of reskilling programmes as well as the impact reskilling has on the digital transformation programme needs to be undertaken which is not the case with the organisation under the study (Cozzarin & Formaneck, 2013). South Africa has a productive economy however, its labour market efficiency performance indicates that the country has not fully realised the potential of its human resources (Schwab, Davis, Ratcheva & Srivastava, 2013).

The exact impact of the digital transformation (DT) phenomenon on business is unknown currently. Digital Transformation is not a foreign phenomenon in this large Financial Organisation, though its application in the local context is in its early stages. It is critical to conduct studies to detect skills that need to be developed as well as those that will be replaced, as this will result in policies and good practices that will positively impact organisational productivity and workforce employability. Very little research has been conducted on the role of reskilling programmes on the digital transformation at a large financial services organisation. In this regard, this study examined the role of reskilling programmes on the digital transformation at a large financial services organisation.

1.4 Aim and Objectives of the study

The aim of this study is to investigate the role of reskilling programmes on the digital transformation at a large financial services organisation. The objectives of the study were as follows:

1. To determine the effects of digital transformation on jobs in large financial services organisation
2. To determine the relationship between digital transformation and reskilling programmes in large financial services organisation
3. To investigate the role of reskilling and programmes in large financial services organisation
4. To provide recommendations on how to enhance digital transformation and reskilling programmes at large financial services organisation

1.5 Research question

Arising from the objectives of the study, the following research questions were posed:

1. What are the effects of digital transformation on jobs in large financial services organisation?
2. What are the relationships between digital transformation and reskilling programmes in a large financial services organisation?

3. Why reskilling programmes have a role in a large financial services organisation?

4. How can recommendations be provided to enhance digital transformation and reskilling programmes in a large financial services Organisation?

1.6 Hypotheses

A specific prediction about a potential new phenomenon is known as a hypothesis. It is a justification that depends on the observation of important study concepts. Frequently, hypotheses are precise predictions of what will occur in a particular study (Kumar, 2019).

Below are the hypotheses that have been developed for this study:

HO1 – Digital Transformation does not have a significant impact on jobs in large financial services organisation.

HA1 - Digital Transformation in Banks does have a major impact on jobs and new emerging job functions in large financial services organisation.

HO2 – There is no direct relationship between a digital transformation programme and requirement for reskilling programmes.

HA2 – There is a direct relationship between a digital transformation programme and requirements for reskilling programmes.

HO3 – Reskilling programmes are ineffective in preparing the workforce of the future at a large financial services organisation.

HA3 – Reskilling programmes are effective methods of developing the workforce of the future at a large financial services organisation.

1.7 Research Philosophy

The researcher’s ontological, epistemological, and axiological perspectives are helpful when contextualising, understanding, and interpreting the researchers proposed approach to research (Chinomona, 2014). Epistemology is a philosophical branch concerned with the nature and scope of knowledge. It comes from the Greek word

epistêmê, which means "knowledge" (Brannen, 2017). The philosophy of epistemology is concerned with the question of how human beings come to acquire knowledge and the beliefs that are deemed acceptable and valid on how to generate, understand, and use knowledge (Allmark & Machaczek, 2018). Philosophies such as positivism, interpretivism, and realism differ and sometimes complement each other in epistemology, according to the existing literature (Quinlan, 2019). According to social scientists, positivism uses deductive hypothesis (explanations) to acquire knowledge and test it by measuring reality.

Positivism is a scientific approach to studying human behaviour that places a premium on empirical evidence. The world, according to positivism, is autonomous and unaffected by the researcher, allowing for objective and value-free inquiry. Positivist research is distinguished by descriptive conclusions, replication of findings, and controlled experimentation. Quantitative methods are frequently used in positivist studies to identify inferential associations or causal relationships.

1.8 Research Methodology

This study used the quantitative research methodology approach, where data was collected and quantified. A quantitative study is focused on objectivity and is typically appropriate when there is a possibility of gathering quantifiable measures of variables and inferences from a suitable sample population. The quantitative research approach taken by the researcher included the adoption of structured procedures and formal instruments for the purposes of data collection, through a closed ended questionnaire. The analysis of all data was performed using SSPS Version 28 as the statical procedure tool (Querios, 2017). A deductive approach was used that enabled the collection of data and the use of that data for analysis and testing of the research objectives

1.9 Theoretical Framework

The research was undertaken at a large and well-established financial services provider. In the last two decades large organisations have become increasingly more effective at evaluation and using data to demonstrate the role and impact of learning and reskilling programmes. The challenge therefore is not so much collecting and

aggregating data from within the organisation, but rather which framework is suitable for measuring effectiveness of the role of reskilling programmes.

The Kirkpatrick's model was used as the basis of the literature. Kirkpatrick's four-level Model was rather simplistic; thus, Kaufman created a five-level evaluation model that assesses the impact on various groups as opposed to Kirkpatrick's assessment of impact type (Kaufman, Keller & Watkins, 1996). Phillips (2016) expanded on Kirkpatrick's model by introducing a fifth level of evaluation that emphasises the importance of measuring the financial impact of training programmes and ensuring that they provide a positive return on investment for the organisation. This level focuses on measuring the return on investment (ROI) of training programmes, and to do so, Phillips recommends a comprehensive approach that considers all of the costs associated with the program, including the cost of developing and delivering the training, as well as the time and resources required to complete the program.

1.10 Significance of the study

Technological and disruptive innovations have significantly reduced the barriers to entry into financial service offerings, in turn making the industry more competitive. Current, well established large financial services organisation face competition from varying external forces such as start-ups and innovative products emerging from non-conventional financial service organisations and competition for a share of the customers wallet is not only within the sector but is now also across industries as well. This rapidly changing environment presents an opportunity for the financial services industry to revitalize itself and thereby present new and innovative job opportunities for current incumbents (Deloitte Insights, 2018). This study provides an insight into the impact that digital transformation has on the job roles of current employees. In addition, the study reveals the value that organisations place on varying future fit skills and capabilities.

In the new world of work, learning is a key driver for the change in organisations that need to be future-ready and for those who are going through a rapid digital transformation process. Business priorities have undergone rapid shifts, creating the need for a flexible and agile workforce, and demanding more specialists in areas such

as Cloud development, data specialist and cyber security specialists. These are not traditional Information Technology (IT) roles and skills, therefore reiterating the need for rapid and effective reskilling and upskilling across pivotal functions within the business. Earlier business transformation journeys took place at a much slower rate and in turn, workforce transformations took place over many decades. This slow rate of transformation created the space for the aging workforce to retire and for the new incumbents to gradually transition. Rapid upskilling and reskilling programmes where not part of the natural human resource development plans. This study shows how reskilling can accelerate the internal capabilities of the organisation.

The observable outcomes from the study will elevate the focus on reskilling by providing a better understanding of the impact of reskilling and upskilling on business performance measures and the realisation of the business strategy. Furthermore, the study brings a focus to rapid upskilling for future-skills in a future-fit organisation.

1.11 Delimitation and scope of the study

This study is focused on jobs impacted by digital transformation within a large financial services organisation. Boundaries guiding the way data is gathered, the reporting and the feedback of results is guided by the philosophical framework that has been articulated.

1.12 Chapter Overview

The dissertation is divided into the following five chapters:

Chapter 1: Overview of the study

The first chapter provides an overview of the study in terms of the study's background, the research problem, the study's aim and objectives, the significance and scope of the study, the research methodology and design, and the dissertation's structure.

Chapter 2: Literature review

The literature review provides an overview of previous research on digital transformation; a discussion of the characteristics of digital transformation; the

importance of reskilling programmes, and the link between digital transformation and reskilling.

Chapter 4: Research Methodology and Design

In this chapter the following aspects, *inter alia*, are discussed: the research methodology and design adopted; the sampling technique used; the questionnaire design, and the data analysis techniques used for the empirical study.

Chapter 4: Findings

In this chapter, the results of the empirical study are presented. The results are presented using descriptive statistics in the form of graphs, tables and charts for the quantitative data collected via the responses from the questionnaire.

Chapter 5: Discussion of Results

This chapter included detailed critical discussion of the results obtained from the study in relation to the available literature. A variety of appropriate statistical tests were used to analyse and interpret the data collected from the completed questionnaires, with a view to identifying important patterns and relationships. Moreover, the view through the lenses of the TIPs framework was discussed.

Chapter 5: Review, Conclusion and Recommendations

Conclusions and Recommendations: included a summary of the study and recommendations to better or further the study. The chapter incorporates the conclusions on the findings of the study. Recommendations to improve the reskilling programmes and digital transformation and ROI were discussed in the chapter. The limitations of the study were highlighted in the chapter. Thereafter, the limitations of the study are outlined, and suggestions for future areas of research are presented.

1.13 Conclusion

This chapter provided an overview of the research. This chapter discussed the study's background, research problem, and study's aim and objectives. Aside from that, the significance and scope of the study, as well as the research methodology and design used, were briefly described.

The literature on reskilling programme and digital transformation is examined and discussed in the following chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The pace of technology development is relentless, consequently human reskilling is a crucial factor in assisting a business and its employees in achieving inclusive growth and sustainability. The three major forces influencing an organisation's growth today are automation, artificial intelligence, and digitalisation. In context of this, the organisation should reskill current employees to ensure that its workforce has the skills needed for the future. A different skill opens potential for both employers and employees to perform better and remain around for the long - term (Sasmita & Kumar, 2018).

In this chapter the relevant literature pertaining to digital transformation and reskilling programmes is discussed. The literature review covers, *inter alia*, the definition of digital transformation and reskilling programmes; a discussion of the importance of digital transformation.

2.2 Reskilling

Reskilling is the development of new skills and knowledge to give an opportunity to perform new jobs or professions (Cole, 2018). A paradigm shift is taking place as the globe undergoes the digital transition known as Industry 4.0. This paradigm shift will have a significant impact on the workforce as well as strategy, talent, innovation, and business models. The workforce of the 21st century is dedicated to 21st-century technologies and skills (Li, 2020). There is general agreement among researchers who have conducted these analyses that the advent of intelligent software systems, AI, and machine learning will not cause widespread unemployment (Ahmad, 2109).

Reskilling refers to the process of developing new skills and knowledge to adapt to changes in the job market and workplace (Dubb & Overholt, 2018). As technology rapidly evolves and new digital tools and processes emerge, reskilling has become increasingly important for employees to remain competitive in the job market. Reskilling initiatives can benefit both employees and employers by improving

productivity, increasing job satisfaction, and reducing turnover rates (Witte, 2021). This can lead to a more efficient and effective workforce, as well as a more competitive business. In many industries, reskilling programmes have become a necessary part of business strategy. For example, in the banking sector, new technologies such as artificial intelligence and blockchain are transforming the way banks operate and interact with customers (Borkowski & Cudé, 2018). As a result, reskilling has become a critical component of digital transformation in the banking sector. Reskilling can take many forms, including on-the-job training, formal education, and e-learning programmes (Dubb & Overholt, 2018). The method of reskilling used can depend on the industry and specific job requirements. The success of reskilling initiatives can be evaluated using frameworks such as the Kirkpatrick model, which assesses the effectiveness of training programmes at different levels, including reaction, learning, behaviour, and results (Ibrahimi & Ahmed, 2013).

Reskilling is not only important for employees who want to remain competitive in the job market but also for those who have been displaced due to job automation and other technological advancements (Witte, 2021). In such cases, reskilling programmes can help these workers to acquire new skills and find new job opportunities. While reskilling can be beneficial, there are also challenges that must be addressed, such as the cost of training and the potential for disruption to business operations (Dubb & Overholt, 2018). However, the benefits of reskilling programmes often outweigh the costs, as they can help to future-proof businesses and ensure their long-term success (Witte, 2021). Reskilling can also help to promote diversity and inclusion in the workplace by providing opportunities for employees from underrepresented groups to acquire new skills and advance their careers (Dubb & Overholt, 2018). Overall, reskilling has become an essential part of business strategy in many industries, particularly those undergoing digital transformation. Reskilling initiatives can benefit both employees and employers by improving productivity, increasing job satisfaction, and promoting long-term business success (Borzekowski & Cudé, 2018).

Furthermore, many job functions will be eliminated, necessitating training, retraining, reskilling, and upskilling to equip today's students and workforce with the creativity necessary to answer Industry 4.0's call (Moritz & Zahidi, 2021). As technology advances, some people struggle to find decent jobs because they lack the necessary

skills, while others worry that automation may endanger low-skilled jobs. Therefore, unless today's workers, who are most at danger of losing their jobs, learn new technology and seize the chance to gain the skills needed for future employment, skill gaps will certainly widen. Many higher-skilled workers have seen their median salaries stagnant, making their job security more tenuous, while some have enjoyed salary increases. People would be completely prepared to engage in economic development if efforts were made to focus on scalable reskilling and upskilling, which would reduce inequality and improve social stability (Moritz & Zahidi, 2021).

The future-ready workforce will regularly enrol in reskilling programmes as they develop in their careers and find employment in order to improve their work abilities. Employees that are upskilled acquire new abilities to support their present responsibilities. For instance, an accountant who previously utilized a manual ledger book for accounting learns how to balance the company's balance sheet using digital spreadsheets (Bisen, 2020). Employees who need to reskill must have the knowledge and abilities to fill varied or altogether new tasks. For instance, when cell phones replaced landlines as the primary means of communication, the switchboard operator job was rendered obsolete. Therefore, in order to transition into a new vocation, those operators will need to reskill (Sasmita & Kumar, 2018).

Employees can acquire information, skills, and competences through formal, informal, and non-formal means (Cole, 2018). Importantly, just as machines that are not maintained deteriorate with time, humans' knowledge and skills that are not maintained deteriorate with time. Continuous learning is necessary to adapt to changing labour market demands, as is a significant paradigm shift from the current model of the educational system. It is necessary to adapt learning strategies for different formats and lengths of time, including reskilling and upskilling, to encourage curiosity, creativity, and imagination, as well as to instil confidence in on-going learning and a desire for continuing development (Sasmita & Kumar, 2018).

A flexible, learner-centred strategy is required to provide both foundational and experience learning throughout the lifetime learning trajectory and to enable learners to customize their own skills acquisition. To continue to shape the system and work together to deliver high quality reskilling and upskilling possibilities for the advancement of employees as well as organisations, this system will need to

strategically integrate businesses, employers, and learners themselves. While "upskilling" refers to learning a new talent or providing employees with new skills, "reskilling" is the process by which people learn a new skill to perform a different job or aid other people to perform a different profession (Wahab, Iqbal, Feroz & Saeed, 2021).

The ability of modern AI to take on increasingly more complicated tasks is shifting the function of knowledge workers, just as the industrial revolution changed the role of human employees from individual craftsmanship to ensuring that machinery runs smoothly (Bisen, 2020). Knowledge and work are interwoven, with organisational structure and job experience influencing how employees acquire knowledge in dynamic, highly uncertain contexts. We examine knowledge from two viewpoints, first the nature of knowledge and secondly forms of knowledge, in order to assess the value of knowledge for structuring an approach to deskilling, upskilling, and reskilling in the age of AI (Rafner *et al*., 2021).

2.3 Kirkpatrick Model as reskilling evaluation Framework

Evaluation refers to “Any endeavour to acquire information (feedback) on the impacts of a training programme and assess the training's usefulness in light of that information in terms of its potential to offer feedback” (Topno, 2012:109). Kirkpatrick's evaluation levels consist of four layers: reactions, learning, behaviours, and outcomes (Mowry & Crump, 2013). For this study the Kirkpatrick’s model for learning (1959) and training evaluation was appropriate. A reskilling programme's effectiveness cannot be determined until the question of what is being evaluated can be satisfactorily addressed. Alliger and Janak (1989) evaluated Kirkpatrick's four levels of training criteria thirty years after the model was first presented and highlighted its widespread use and dominance as the major evaluation methodology. Despite the existence of several theories for evaluating training effectiveness, Kirkpatrick's four-level model has remained the standard framework for classifying training requirements and the predominant framework for assessing the efficacy of training programmes (Galloway, 2005). However, critics argue that the Kirkpatrick model is less practical than Kaufman's model due to unclear terminology, the need to evaluate societal consequences and customer benefits, and difficulty obtaining robust data. On the

other hand, supporters of the model find it useful to consider the impact of learning on customers and society in certain contexts (Downs, 2019).

The banking sector is continuously evolving due to advancements in technology, customer needs, and market competition. Reskilling programmes are essential to help banking employees adapt to these changes and maintain their relevance in the industry. The Kirkpatrick Model can be applied to evaluate the effectiveness of reskilling programmes in the banking sector as follows:

1. Reaction: In this level, the participants' reactions to the reskilling programme are evaluated through surveys and feedback forms. The banking employees can be asked about the relevance of the programme to their job responsibilities, the quality of the training content, and the training delivery methods. This information can be used to make improvements to the programme based on the employees' feedback.
2. Learning: This level evaluates the knowledge and skills that the banking employees have acquired through the reskilling programme. Assessments such as quizzes, exams, or skills demonstrations can be used to evaluate the employees' learning outcomes. The focus can be on the application of new technologies, compliance with regulatory requirements, or customer service skills, among others.
3. Behaviour: In this level, the application of the acquired knowledge and skills is evaluated in the workplace. The banking employees can be observed to determine if they are applying the acquired knowledge and skills in their work tasks. The evaluation can be done through performance reviews, peer feedback, or supervisor evaluations.
4. Results: The results level evaluates the impact of the reskilling programme on the banking organisation's performance. The focus can be on the key performance indicators such as increased customer satisfaction, reduced errors, increased productivity, and profitability. This level can be evaluated using data such as performance metrics and customer feedback.

There have been several studies on the application of the Kirkpatrick Model as a reskilling evaluation framework in the banking sector. The study conducted by Ibrahimi and Ahmed (2013) evaluated a reskilling programme for the banking employees in Malaysia using the Kirkpatrick Model. The study found that the programme was effective in improving the employees' knowledge and skills, and there was a positive

impact on the bank's performance. Mohamed’s study (2016) evaluated a reskilling programme for bank tellers in the United Arab Emirates using the Kirkpatrick Model. The study found that the programme was effective in improving the employees' skills and competencies, and there was a positive impact on the bank's performance.

The study of Al-Qudah and Al-Qudah (2016) proposed a model for evaluating reskilling programmes in the banking sector based on the Kirkpatrick Model. The model was applied in a case study in Jordan, and the study found that the model was effective in evaluating the reskilling programme's effectiveness.

Overall, these studies demonstrate the effectiveness of the Kirkpatrick Model as a reskilling evaluation framework in the banking sector. The studies highlight the importance of evaluating reskilling programmes to ensure their effectiveness and impact on the organisation's performance. The application of the Kirkpatrick Model in evaluating reskilling programmes in the banking sector can help organisations to determine the effectiveness of their reskilling programmes and make data-driven decisions to improve their reskilling initiatives. It can also help the employees to identify the gaps in their knowledge and skills and apply them to their work tasks, leading to better performance, job satisfaction, and career growth.

2.4 Nature of Knowledge

One of the earliest and most influential theories of knowledge is the empiricist view, which asserts that all knowledge is derived from sensory experience (Lacey, 1999). According to this view, knowledge is obtained through observation and experimentation, and it is based on empirical evidence. The British philosopher John Locke, who was one of the pioneers of empiricism, argued that the human mind is a blank slate at birth, and all knowledge is acquired through experience (Lacey, 1999).

The term "knowledge" refers to information or understanding that is acquired through experience, observation, or study (Chalmers, 2018). However, different schools of thought have proposed varying theories on the nature of knowledge and how it is acquired. The empiricist view asserts that all knowledge is derived from sensory experience (Locke, 2018), while the rationalist view posits that knowledge is obtained through reasoning and intuition (Descartes, 2019). On the other hand, the constructivist view holds that knowledge is constructed by individuals based on their

experiences and interactions with the world around them (Piaget, 2018). Despite ongoing debate among scholars about the nature of knowledge and how it is acquired, recent developments in fields such as neuroscience and artificial intelligence have led to new insights and questions on this topic (Kandel, 2018).

2.4.1 Types of Knowledge

In order to analyse how technological advancements have affected the types of knowledge needed to complete tasks and how various forms of information are shared between humans and technology; a variety of frameworks have been developed. Essential variables concentrate on different professional and organisational knowledge kinds, such as procedural and domain knowledge (Arnold & Sutton, 1998; Barnard & Harrison, 1992). The task domain comes first, and it can include everything from motoric/craftsmanship (such as robotics) to cognitive (such as decision-making support systems and knowledge management systems) and empathetic/caregiving (such as health technologies) domains. Second, there are the task characteristics, which Davenport and Kirby (2016) divided into four categories: performing physical tasks, performing digital tasks, and performing tasks involving words and images.

Third, we have associated work procedures that can be categorized according to Bhardwaj's classification as knowledge-based behaviour (novel/abnormal tasks, slow efficiency), rule-based behaviour (reasonably well-known environment, medium efficiency), and skill-based behaviour (automatic behaviour in familiar situations, high efficiency). In general, procedural knowledge is anticipated to endure whereas descriptive knowledge's significance will wane (Trösterer, 2016).

. External implications can include the reorganisation of the workforce (changing highly trained individuals with less skilled people), deskilling at the individual level (lowering the general competency level of the workforce), or ultimate full automation (decreasing the workforce). There are several personal/internal impacts that can result from an overreliance on algorithms, a decrease in professional engagement, a reduction in professional decision-making skills, and an inability to make high-quality decisions without assistance (Mascha & Smedley, 2007).

Induction training is necessary for new hires to fulfil their duties effectively. They can rapidly and efficiently perform at the needed level in their jobs with the support of

instructions, coaching, and supervision. Existing personnel need training to increase their performance in their current roles and to prepare them by teaching them new technologies for advancement into higher positions. Existing personnel do need new training to stay current with technology and increase productivity. When a person transitions from one job to another, training is required to bridge the gap and meet the requirements of the new position. Additionally, training gives one the tools necessary to make earnest attempts to enhance performance and accomplish career goals (Jain & Dikshit, 2017).

In a study on the Nigerian banking sector, Ldama and Bazza (2015) found that managers are quite concerned about staff retention, especially when it comes to hiring qualified workers. Reskilling people to stay in their employment through incentive is of the utmost importance since skilled personnel enable firms to achieve a competitive advantage. According to Awolusi (2013), a highly motivated individual is an asset to an organisation if they possess the necessary skills and knowledge for their position and work diligently towards achieving the organisation's objectives. However, it is a fact that the motivational techniques used in the past to inspire bank employees may no longer be effective in the present. In Nigeria's banking sector, monetary incentives such as large housing allowances and end-of-year bonuses were widespread and considered an effective retention strategy. Nonetheless, banks were consistently failing, and research by Gunu and Olabisi (2012) found that the Nigerian banking industry experienced significant failure at various points due to inadequate performance and a shortage of competent employees.

Over the past 20 years, the lack of highly qualified professionals with global and intercultural experience (such as expatriates) has become a significant challenge for international businesses (Dickmann, 2017; Manpower, 2017; Schuler, Jackson, Tarique, 2011). As a result, 40% of employers report difficulty hiring staff, which is the highest percentage since 2008 (Manpower, 2017). Employers must learn how to adapt to fast changing circumstances, where to obtain new skills for the "distance economy," and how to connect those individuals with new responsibilities and activities. In the aftermath of the pandemic, there is an increasing need for leaders to focus on upskilling and reskilling their workforce to align with new business models. Reskilling efforts are typically directed towards improving individuals' abilities in advanced data

analysis, leadership, people management, critical thinking, and decision-making (Kapoor & Kapoor, 2021). This emphasis is in response to the significant changes that have occurred in the workplace, where new technology and processes require a new set of skills that traditional training programmes may not provide (Durrant & Meijers, 2019). According to earlier research (Przytua, 2018), all these abilities will be more in demand in the upcoming years (McKinsey & Company, 2020). The development of four skill sets should be prioritized, according to Agrawal *et al*. (2020) digital, higher cognitive, social, and emotional flexibility, and resilience.

Knowledge can be classified into different categories based on various factors, such as its source, form, and nature. Here are some of the commonly recognized types of knowledge:

1. Explicit Knowledge

   Explicit knowledge refers to information that can be codified and transmitted through language, symbols, or other forms of communication. This type of knowledge is often written down or expressed in formalized procedures, manuals, or databases. It can be easily communicated and shared among individuals and organisations and is often used in formal education and training settings (Alavi & Leidner, 2001).

2. Tacit Knowledge

   Tacit knowledge, on the other hand, is knowledge that is difficult to articulate or express in words. It is often personal, experiential, and context-dependent, and is based on skills, intuition, and know-how that individuals have acquired through their experiences and interactions with the world around them (Nonaka & Takeuchi, 1995). Unlike explicit knowledge, tacit knowledge is often difficult to transfer or share with others, and is typically acquired through observation, trial-and-error, and socialization.

3. Procedural Knowledge

   Procedural knowledge refers to the knowledge of how to perform certain tasks or activities. It involves understanding the step-by-step processes and procedures required to complete a particular task, such as driving a car or

performing a medical procedure (Anderson, Reder & Simon, 1996). Procedural knowledge is often closely linked to tacit knowledge, as it is acquired through practice and experience.

4. Declarative Knowledge

   Declarative knowledge refers to the knowledge of facts, concepts, and principles. It involves understanding the meaning and relationships between different pieces of information and being able to recall and apply that knowledge to new situations (Anderson, Reder & Simon, 1996). Declarative knowledge is often a key component of formal education and training, as it enables individuals to understand the fundamental principles and concepts underlying a particular field or discipline.

5. Implicit Knowledge

   Implicit knowledge is knowledge that is unarticulated, unconscious, or automatic. It involves understanding how to perform certain tasks or activities without consciously thinking about the steps or processes involved (Reber, 1993). For example, an experienced basketball player may be able to shoot a basket without consciously thinking about the angle, speed, and trajectory of the ball. Implicit knowledge is often acquired through practice and repetition and is closely linked to procedural knowledge.

6. Conceptual Knowledge

   Conceptual knowledge refers to the knowledge of abstract concepts, such as theories, models, and frameworks. It involves understanding the relationships and connections between different ideas and being able to apply those concepts to solve problems or make decisions (Merrill, 2002). Conceptual knowledge is often a key component of advanced education and training, as it enables individuals to think critically and creatively about complex issues and challenges.

Knowledge is a multifaceted concept that can be classified into different categories based on various factors, such as its source, form, and nature. By understanding the different types of knowledge, individuals and organisations can better identify, acquire,

and apply the knowledge they need to achieve their goals and objectives. Whether it is explicit or tacit, procedural, or declarative, implicit or conceptual, knowledge is a valuable resource that can help individuals and organisations to innovate, adapt, and thrive in an ever-changing world.

2.5 Reskilling Methods and Programmes

Reskilling is becoming increasingly important in today's fast-changing job market, as technology evolves, and new digital tools and processes emerge. To remain competitive and relevant, organisations need to focus on reskilling employees and providing them with the necessary skills to adopt new technologies and work processes. In section the researcher explored some of the methods and programmes that organisations use for reskilling their employees. According to research done by Deloitte (2017), approximately 37% of banking executives think that their banks are not focusing on developing the workforce of the 4IR, most of their employees can be retrained to have the skills and competencies that they will need. 72% of respondents, who also believe that the education system should prepare people for the 4IR. In addition, 82% of respondents believe that their organisations' relationships with their workforces will shift toward temporary, contract, and ad hoc workers. Furthermore, a study that evaluates the ability of banks to use digital technology reveals that 62% of the executives agree that it will make their workforces more efficient, 28% that it can effectively harness the capabilities of advanced technologies, 22% that the development of the necessary organisational capabilities can advance the implementation of technology across the organisation, and 13% that it will help them solve processing organisational problems (Deloitte, 2017).

Digital transformation has the potential to make employees' lives better through making them more efficient and lowering future corporate expenses. For instance, some banks in Singapore and Hong Kong have embraced Al. Al is widely used in the banking sector and enhances the way that some tasks are carried out in banks, such as handling basic confirmation and information requests before sending them to a live representative, moving routine inquiries to Chatbots or virtual assistants, and integrating tasks that involve humans and those that involve technology (Tebaga & Mamela, 2020). As a result of the impact of advanced technological innovations on

business models and the nature of work, as well as how intelligent robots are changing the job descriptions of today, many researchers believe that in the future, the skills needed to perform most jobs will change significantly. According to a report by the World Economic Forum from 2018, the proportion of basic skills needed to do a job will slightly grow and be around 58%, which represents an average shift of 42% in the skills needed by the workforce.

For the future of employment, technological proficiency is always essential. Some of the "human" skills that will help increase the self-worth and confidence of the workforce include ingenuity, creativity, and innovation, complex thinking, leadership. Additionally, social skills like flexibility, adaptability, and complex critical thinking are crucial. Deep understanding, management, social relationship, and leadership all see a disproportionate rise in popularity in comparison to their current conspicuousness because of the technological disruption. In other words, it is likely that these developments will be given to employees who have a great need for re- and up-skilling (Dimov, 2017).The reskilling of banking workforces for technological adaptation can help to develop a client experience that can be used to customize offers, services, and communication. The entire banking industry needs to be retrained to become more agile, cut costs, and boost production (Accenture Consulting, 2018).

There are sophisticated gaps between the capacities of the workforce, work, and new technological advancements. Technology adaptation can improve the development of banking institutions, create new employment opportunities, and increase the demand for scarce specialized knowledge and skills (Allen, 2018), however, by replacing the workforce with completely automated systems, technology adaption might also render the current employment responsibilities obsolete (Krasadakis, 2018). The implementation of automated procedures may be sped-up in the workforce and by bank management, but a skills shortage may create bottlenecks and obstacles for technology adoption that may eventually lower organisational efficiency (Fountaine & Tamim, 2019). Some reskilling techniques are:

1. Re-certification

   Some professional positions necessitate ongoing re-certification to make sure that employees stay abreast of cutting-edge technology and the most recent best practices. For instance, in the middle of the information age, the role of

chartered accountants and quantitative analysts has changed, which means the amount of knowledge required to perform the job will double every three years or even more quickly.

2. On-the-job Training

   A business's offer to its employees should be the main focus of the design phase of a future-of-work programme because the relationship between an organisation and its people is a two-way street. To ensure that employees see the advantages of learning new skills and technology, businesses need to create compelling and clear value propositions and accommodate the reskilling of employees to practice and learn new skills whilst in their incumbent roles. One of the most common methods of reskilling is on-the-job training, which allows employees to acquire new skills and knowledge while working. On-the-job training involves coaching, mentoring, and job shadowing, where employees work alongside more experienced colleagues to learn new skills and techniques. According to Dubb and Overholt (2018), on-the-job training is one of the most effective methods of reskilling, as it allows employees to learn in a real-world environment, where they can apply new knowledge and skills immediately. On-the-job training can also be tailored to the specific needs of the organisation and individual employees, making it a flexible and cost-effective method of reskilling.

3. Self-study and formal learning programmes

   Another popular method of reskilling is formal education, such as attending conferences, workshops, and seminars, or pursuing higher education degrees. Formal education provides employees with the opportunity to acquire new skills and knowledge from experts in the field, as well as interact with other professionals in their industry. For example, a software company may send its employees to a conference on the latest programming languages, or a hospital may offer its nurses the opportunity to attend a workshop on new medical treatments. Formal education has been recognised as a structured and systematic approach to reskilling, enabling employees to gain a comprehensive

understanding of the latest industry trends and technologies (Eisenhardt & Schoonhoven, 2016; Raza, Jawaid, Ali & Hussain, 2018).

Online self-study courses have become more readily available in recent years to help people who want to improve or reskill their intellectual capacity. Current and new professionals can stay up to date on the technologies that employers are looking for by choosing from a variety of course topics created by the best experts in the field. The technologies listed below are by no means exhaustive, but with targeted reskilling programmes organisations can aid their employees in gaining an understanding of the technology portfolios where reskilling is a priority and in demand (Sitzmann & Ely, 2011).

4. Artificial Intelligence

   The rapid growth of sensors and computer chips, the evolution of algorithms, and the support of big data have accelerated the development and application of AI since 2000, particularly after 2015. AI has been identified as a strategic innovation tool in information technology that can enhance the competitiveness of businesses. AI technologies, such as natural language processing, machine learning, and deep learning, provide applications in numerous industries with sophisticated data analysis capabilities (Chen, Li & Chen, 2021).

5. Quantum Computing

   A revolutionary technology called quantum computing uses the concepts of quantum mechanics to try to comprehend how information is processed and transmitted. It incorporates quantum physics effects, such as theoretical problems with computational models and experimental quantum physics topics, into the study of Information and Communication Technology (ICT). The operation of Industry 4.0, which integrates the digital revolution into the physical world and offers new directions in artificial intelligence and nanotechnology, is thus expected to undergo a significant paradigm shift as a result of quantum technologies (Kim, 2017).

6. Data Science

   Nearly 30% of data by 2025 will be of the "real-time" variety. Real-time data is information that is gathered from customer insights or business hardware and software as business operations are taking place, as opposed to after the fact (Sitzmann & Ely, 2011). Companies start to discover new ways to connect as operational technology and information technology converge. Data gathered from businesses, customers, and suppliers can be synchronised with precise production data and adjusted in real-time. With the help of automated information exchange between machines, systems, and people, the physical and digital worlds have become inextricably entwined. Because they will be necessary for workers in the manufacturing industry, digital skills like coding, data analytics, human-machine interaction, and understanding of information technology were considered to be basic skills. Without human insights to interpret it, the vast amount of data is useless. To write algorithms and create AI that will assist us in making predictions and sane decisions based on the data and facts, we will need a lot more data scientists. By 2026, computer and information research specialists should see a growth in employment of 19% (Kim, 2017).

7. Cybersecurity

   Technologies like computer systems, the Internet, and smart devices are essential to daily life in the digital age. While we appreciate the efficiency and convenience offered by the new technologies, we also face new risks and threats brought on by their use. Businesses of all sizes and in all industries have noticed an increase in the frequency, volume, and sophistication of cyberattacks in recent years (Li, 2018).

8. E-learning programmes

   E-learning programmes are also becoming increasingly popular for reskilling. E-learning involves online courses, webinars, and video tutorials that can be accessed at any time and from anywhere. E-learning provides a flexible and convenient method of reskilling, as employees can learn at their own pace and

in their own time. According to a report by the World Economic Forum (2020), e-learning is expected to become the primary mode of reskilling in the future, as it can be cost-effective and accessible to a large number of employees. E-learning programmes are available for a wide range of industries and topics, from coding and data analytics to leadership and communication.

In addition to these methods, organisations can also create their own reskilling programmes, tailored to the specific needs of their business and employees. These programmes can be designed to address skill gaps within the organisation, or to prepare employees for future job roles. For example, a retail company may offer a reskilling programme to its sales associates, teaching them new skills such as customer service, merchandising, and e-commerce. Such programmes can be an effective way of developing new skills and retaining employees within the organisation, as well as ensuring that the business remains competitive in the market (McKinsey Global Institute,2018).

Furthermore, organisations can also partner with external agencies or institutions to provide reskilling programmes for their employees. For example, a software company may collaborate with a university to offer a reskilling programme in artificial intelligence, or a bank may partner with a training provider to offer a programme in financial technology. Such partnerships can provide organisations with access to expertise and resources that they may not have internally, as well as increase the visibility and reputation of the organisation as a forward-thinking and innovative business. In conclusion, reskilling is essential for the success of organisations in today's fast-changing job market (Kapoor & Kapoor, 2021).

The methods and programmes used for reskilling are diverse and flexible, allowing organisations to tailor their approach to the specific needs of their business and employees. On-the-job training, formal education, e-learning programmes, internal reskilling programmes, and external partnerships are all effective ways of providing employees with the necessary skills.

2.6 Factors effecting reskilling of employees

2.6.1 Multi-generational Workplace

Different generations may develop their digital skills in different ways. The Generation X was born between 1965 and 1980 (currently ages 41-56), the Millennial Generation or Generation was born between 1981 and 1996 (currently ages 25-40), and the Generation Z was born between 1997 and 2012 (currently ages 9-24). The Baby Boomer II generation was born between 1955 and 1964 (currently ages 57 to 66) Rudolph *et al*., 2021). The Baby Boomer II generation has a big impact on how human resources are developed. In the Millennial generation, recent graduates use and adapt to technologies in daily life. However, many of them lack the knowledge and abilities required by the labour market, particularly in digital skills. Many skilled and seasoned workers on the market must also pick up new knowledge and abilities that are in line with requirements in the age of technological disruption. By enhancing the knowledge, skills, and competencies of their employees through educational scholarships, training, and other development programmes, many businesses offer HRD programmes to create a knowledge-based society. Although there are many programmes for employee development, not all employees take advantage of them. Many of the programmes that are available don't fit their needs or appeal to their interests (Schneeberger & Sauter,2018).

Only a few organisations, according to Hora (2021) are successful with the digital transformation due to the many difficulties they face, particularly with regard to people and organisational culture. About 88% of the 91 executives from various industries who participated in the survey acknowledged that their industries would be significantly or fundamentally disrupted. Technology, media and telecommunications, and financial services are the industries that adjust to this change quickly. Surprisingly, rather than technology, lack of digital skills is the biggest obstacle to implementing digital transformation. Employers need to equip their staff with digital skills as well. Activities, personnel, culture, and organisational structure should all be coordinated with a digital transformation objective.

2.6.2 Individual elements

Individual factors have an impact on learning at work. Individuals' identities and attitudes affect their learning at work (Schwartz, 2019). Employees will proactively discover the information they require and the best times to access it. Once they acquire new information and abilities, they might be eager to impart their wisdom and experiences to others. However, the individual's willingness and opportunity to share their learning may be influenced by contextual factors such as the organisational climate, interpersonal relationships, and the nature of the work itself (Billett, 1995).

2.6.3 Place of employment

The motivation for learning and knowledge acquisition are both impacted by the workplace environment. Workplaces with few opportunities for professional advancement could be seen as less conducive to learning (Schwartz, 2019). Employees will be able to learn more in environments that offer fresh challenges or job rotation to enable them to make independent decisions. Additionally, workplaces with professionals who can assist, counsel, or mentor co-workers can affect a person's motivation to learn (Billett, 1995).

2.6.4 Support and motivation

The incentive is yet another element that encourages people to learn new things and develop new abilities. Individuals' perceptions of the benefits or incentives of participating in a training programme may influence their motivation to do so. Digital skills were found to be positively correlated with income and unique benefits from the workplace (Lissitsa, Chachashvili-Bolotin & Levy, 2017). However, common workplace perks like study funds did not significantly correlate with digital skills.

2.6.5 Career development

Employees who are motivated to advance their careers may also be more inclined to learn new things to maximize their potential and choose more advantageous career paths. Individuals' perspectives, interests, and drive to learn and work change as they

get older and progress through their careers (Kanfer & Ackerman, 2017). According to social-cognitive career theory, engagement in activities repeatedly and external reinforcement lead to the development of interests in work-related pursuits and skill acquisition (Lent,1994). This implies that individual efforts are related to the realization of results. Opportunities and difficulties they encounter at work and in other situations alter their motivational and self-regulatory processes (Heckhausen, Wrosch & Schulz, 2010). Therefore, the level of new skill and knowledge acquisition for career advancement may also be influenced by the motivation of different age groups.

2.7 Motivation for reskilling in organisations

For people to remain competitive in the job market in the digital age, they must adapt, improve, and learn new digital skills. Individuals must be lifelong learners in the digital age. They must continuously learn new things and expand their knowledge and abilities (Hooley, 2012). The educational opportunities that an organisation provides to its employees include reskilling and upskilling. Employees who want to upgrade their skill set for career advancement or to add value to an organisation must retrain and learn new things. Reskilling, in contrast, occurs when an employee wishes to study and/or train in a new skill set or new things that are entirely unrelated to his current area of expertise. A quicker and more effective way to increase the potential and capability of human resources is through reskilling and retraining. The concept of "digital career literacy" refers to the link between career development and digital skills (Hooley, 2012), specifically the ability to utilise the internet to enhance one's career prospects (Kettunen, 2015). Employees must develop digital career literacy to stay competitive in the job market because digital skills are reflected in career development. They can now learn new abilities and information through social media platforms or online courses. Some businesses offer their employees in-house training. They encourage their staff to participate in seminars or training sessions led by professionals in each field. In order to create a knowledge-based society, businesses have started a number of development programmes to improve the knowledge, competencies, and skills of their staff members through educational scholarships, training, and other initiatives (Hooley, 2012).

Reskilling is becoming increasingly important in today's fast-changing workplace. As technology continues to evolve at a rapid pace, employees need to continually develop new skills and knowledge to stay competitive and relevant in the job market (Dubb & Overholt, 2018). The need for reskilling has become more urgent due to the COVID-19 pandemic, which has accelerated the digital transformation of many industries and led to changes in the way work is done (UNESCO, 2020). Reskilling is not only important for employees but also for employers who want to future-proof their businesses and ensure their long-term success (Witte, 2021). Reskilling can take many forms, including on-the-job training, formal education, and e-learning programmes (Dubb & Overholt, 2018). The method of reskilling used can depend on the industry and specific job requirements. For example, in the healthcare industry, reskilling programmes can help nurses and doctors acquire new skills in telemedicine and remote patient monitoring (Deloitte, 2020). In the banking sector, reskilling can help employees adapt to new technologies such as AI and blockchain (Borzekowski & Cudé, 2018). In the retail industry, reskilling can help employees develop new skills in e-commerce and digital marketing (Deloitte, 2020).

The benefits of reskilling programmes are many. For employees, reskilling can lead to increased job satisfaction, improved career prospects, and higher wages (Witte, 2021). For employers, reskilling can improve productivity, reduce turnover rates, and create a more competitive business (Dubb & Overholt, 2018). Reskilling can also help to promote diversity and inclusion in the workplace by providing opportunities for employees from underrepresented groups to acquire new skills and advance their careers (Dubb & Overholt, 2018). The success of reskilling initiatives can be evaluated using frameworks such as the Kirkpatrick model, which assesses the effectiveness of training programmes at different levels, including reaction, learning, behaviour, and results (Ibrahimi & Ahmed, 2013). The Kirkpatrick model can help organisations to measure the impact of reskilling programmes and identify areas for improvement. Other factors that can influence the success of reskilling initiatives include the quality of training materials, the effectiveness of trainers, and the availability of resources (Dubb & Overholt, 2018). While reskilling programmes can be beneficial, there are also challenges that organisations need to address. These include the cost of training,

the potential for disruption to business operations, and the need to ensure that reskilled employees are able to apply their new skills effectively (Dubb & Overholt, 2018). Organisations can overcome these challenges by developing a comprehensive reskilling strategy that considers the needs of the business and the employees. This strategy should include clear goals and objectives, a budget for training, and a plan for measuring the success of the programme (Witte, 2021).

In conclusion, reskilling is an essential part of business strategy in today's rapidly changing workplace. It can benefit both employees and employers by improving productivity, increasing job satisfaction, and ensuring long-term business success. Reskilling programmes can take many forms, and the method of reskilling used can depend on the industry and specific job requirements. While there are challenges that organisations need to address, such as the cost of training and the potential for disruption, a comprehensive reskilling strategy can help to overcome these challenges.

2.7.1 The role of digital transformation on the jobs in the financial sector

Digital transformation has had a significant impact on the jobs in the financial sector, both in terms of the nature of work and the skills required. According to a study by McKinsey and Company (2019), digital transformation is expected to lead to the creation of new job roles in the financial sector, such as data analysts, digital marketers, and cyber-security specialists. At the same time, it is also likely to result in the displacement of some traditional roles, such as manual data-entry clerks and basic customer-service roles. To remain competitive and adapt to the changing landscape, financial organisations are increasingly investing in reskilling and upskilling their employees. Such programmes aim to equip employees with the necessary digital skills to keep up with the changing demands of the industry (Deloitte, 2020). The success of such programmes can be measured by the ability of employees to effectively apply the new skills to their roles, and by the overall impact on the organisation's digital transformation journey (KPMG, 2021).

A study by PwC (2019) highlights the importance of reskilling and upskilling in the financial sector, with 92% of financial services CEOs citing the need to strengthen their organisation's digital skills. In addition to providing employees with technical skills, reskilling programmes also aim to foster soft skills such as adaptability, creativity, and problem-solving, which are becoming increasingly important in the digital age (EY, 2020). While the benefits of reskilling programmes are clear, their implementation can present challenges. For example, the speed of technological change and the need for continuous learning can make it difficult for organisations to keep up (Accenture, 2021). Additionally, the success of reskilling programmes depends on the ability of the organisation to create a culture of continuous learning, where employees are encouraged to learn and apply new skills (Capgemini, 2020).

In summary, the role of digital transformation in the financial sector has led to the creation of new job roles and the displacement of some traditional roles. To remain competitive, organisations are investing in reskilling and upskilling their employees, with the aim of equipping them with the necessary digital and soft skills. The success of such programmes depends on the ability of organisations to create a culture of continuous learning and to adapt to the changing demands of the industry.

2.8 Digital Transformation

Digital technologies have the potential to enhance how strategic decisions are made, the continuous improvement in the capabilities for analytics, and the automation of business operations for services like customer loaning, fraud activity recognition, compliance and policies, client service, and more, machine learning and artificial intelligence (AI) have grown in popularity and demand in recent years for banking institutions and many other financial service institutions. Additionally, the ideas behind AI and machine learning have changed how banks create value (Duch, 2017). The Fourth Industrial Revolution (the "4IR") has radicalized a number of organisational processes and operations that combine the physical, biological, and digital domains. This has had an impact on how people carry out their work as a result. A broad term known as "digital transformation" encompasses a variety of disciplines, including

computer sciences, engineering, mathematics, statistics, logic, business, biology, and more (Duch, 2017). Numerous jobs are at risk of being replaced by AI and intelligent automation due to the ongoing, quickly expanding improvements brought about by digital transformation (Petropoulos, 2017).

Work substitution has existed throughout all technological revolutions and is not a novel concept. "Technological unemployment" is the process by which people lose their jobs as a result of technological change (Matuzeviciute, Butkus & Karaliute, 2017). Typists, administrators, clerks, tellers, and other occupations are just a few of the jobs that have been lost due to technological advancement in recent years. "Technological job obliteration" is the term used to describe the disappearance of jobs that have become obsolete due to technological advancement. Additionally, it has been noted that whenever an industrial revolution occurred, worries about job losses due to technological advancements existed (Peters, 2017).

For organisational workforces to be proficient in carrying out their various work tasks in this modern era, new sets of skills are needed. This also applies to banking workforces, some of which have outdated skills that won't be useful in the fourth industrial revolution. Ultimately, banking institutions must have a strategic approach to re-skilling them in order to learn the skills and competencies that will enable them to remain competitive and put them in a position to increase their work productivity (World Economic Forum, 2018). In addition, the workforce's physical influence, interaction, and speed—which may be less than those of robots—are thought to be less important for jobs in the Fourth Industrial Revolution. However, the workforce's cognitive competencies in a variety of applications may be necessary, even though in some cases robots may also outperform the workforce's competencies (Peters, 2017).

All industries have been impacted by the rise of intelligent robots, which has caused them to undergo a radical transformation that will change how work is done in those industries (World Economic Forum, 2018). Even though AI is generating millions of new jobs, the banking institutions' research warns that the highly skilled and less skilled workforces may become more unequal as intelligent robots replace human labour. With a billion devices currently utilizing the IoT, many organisations are now

facing significant challenges in the areas of cybersecurity and privacy. The impact on employment is no longer restricted to the manufacturing and production industries. In the creation of work, transportation, security, ease of use, and other aspects of daily life, AI and robotics have become routine and the norm (Smith & Anderson, 2020). Intelligent robotics, machines, or software programmes that can mimic human intelligence and can automate tasks performed by humans are referred to as AI. On the other hand, macroeconomic factors like population aging, energy efficiency incentives, and wage changes will also support the organisational need for automation (McKinsey & Company, 2017).

Many nations, including the United States, China, Japan, the United Kingdom, and others, have adopted the emerging idea of deep learning in the financial services sector. This has led to a number of breakthrough improvements in the sector that have simplified and enhanced the analysis process while reducing the need for human intervention in processes like data mining, voice recognition, pattern recognition, market evaluation, and more (Agarwal, 2019). There have been numerous debates and discussions about AI and automation in the South African and global contexts, as well as the potential effects on employment of the technological advancements of the 41R, such as advanced robotics, blockchain, nanotechnology, loT, machine learning, 3D printing, and others. More jobs are anticipated to be lost due to AI than to be gained (McKinsey & Company, 2019). Additionally, it is anticipated that AI will change the nature of work and the overall workplace environment. According to research, more jobs will generally be created than will be rendered obsolete. For instance, earlier technological advancements had a significant effect on the labour market, but the need for increased productivity has always been a driver for job growth. According to predictions, digitalisation, AI, machine learning, and automation will be able to create about 1.8 million new jobs in South Africa, driven by the demand for productivity gains. Additionally, due to the need for increased productivity, the implementation of strategic policies, and the advancement of technology, approximately 4.5 million jobs including those in the financial sector are anticipated to be created by 2030, while only about 3.3 million of the current workforce is predicted to be obsolete (McKinsey & Company, 2019).

There are three stages in the digital transformation process. Individual tasks or processes are automated in the first stage. Related processes are automated and combined in the second phase. The third and most complicated phase involves integrating numerous systems that support information flows and business processes into various enterprise management systems (Gartner, 2021). Several digitalisation projects must be carried out to complete the transformation. It is important to understand the integration of digital technologies into all business areas by looking at digitisation projects (Madudova, Corejova & Valica, 2018). This frequently entails enhancing current business procedures as well as developing new ones, as well as new business models that offer customers more. By developing new business models that specify how an organisation provides value to its customers, this change can be achieved (Madlenak, 2016). Performance improvements may result from organisational change brought on by digital transformation. Cultural change is a shift toward using digital technologies, such as advanced software-based analytical tools and artificial intelligence (AI), to conduct business in more intelligent and agile ways (Chinoracky & Corejova, 2019). It is crucial to understand how the populace has adjusted to the changes brought on by digital transformation. A Microsoft survey conducted in November 2020, that focused on the financial services industry found that the respondents believed the digital transformation to be an opportunity for growth rather than a danger (Bersin, 2021). Gaining new customers, lowering overall costs, raising customer satisfaction, enhancing the quality of existing products and services, and creating new ones were the most frequent reasons for adopting digital technologies (Madlenak, 2016). Thanks to new technologies, the majority of organisations have established or are in the process of establishing digital intrusion teams. In fact, 34% of institutions in the financial sector have a dedicated team for digital transformation, and another 19% do not yet have one but are creating one. Technology provides greater flexibility and aids in maintaining competitive prices in the highly competitive financial services sector, where customers are becoming more and more demanding (Microsoft, 2019).

This study conducted by Kim and Lee (2018) on the systematic review of the literature on the measurement of digital transformation. The study found that most of the

previous research focused on measuring the impact of digital transformation on firm performance, but there was a lack of consensus on the definition of digital transformation and the appropriate metrics to use.

Ridiel and Geisher (2018) surveyed executives from various industries to understand how they measure digital transformation. The study found that most companies focus on measuring the impact of digital transformation on revenue growth, customer engagement, and operational efficiency. The study of Green, Martinez & Lin (2020) proposed a framework for measuring digital transformation that includes six dimensions: strategy, culture, customer experience, operational processes, technology, and analytics. The study used the framework to evaluate the digital transformation of a retail company and found that it was effective in identifying areas for improvement.

Nambisan's study (2019) conducted a systematic review of the literature on digital transformation in the banking industry. The study found that digital transformation had a significant impact on the banking industry, leading to changes in business models, customer experience, and organisational structures. The study also identified future research directions, including the need for more empirical studies on the impact of digital transformation on financial performance. Arcega and Ng (2021) compared the digital transformation strategies of European and American banks. The study found that both groups of banks had similar priorities, such as improving customer experience and operational efficiency, but differed in their approaches to implementing digital transformation. The study also found that the banks that were more successful in implementing digital transformation had a strong digital culture and a clear digital strategy.

The study of Borzekowski and Cudé (2018) analysed the digital transformation strategies of European banks using a survey of bank executives. The study found that the banks that were more successful in implementing digital transformation had a clear digital strategy, invested in digital talent, and had a culture of innovation. The study

also found that the banks that had implemented digital transformation had experienced significant benefits, such as increased customer satisfaction and cost savings.

Overall, these studies demonstrate the importance of digital transformation in the banking sector and provide insights into the strategies that banks can use to implement digital transformation successfully. The studies also highlight the need for more empirical research on the impact of digital transformation on financial performance.

2.9 Variables that influence the Digital Transformation in Financial Services organisations

2.9.1 Political

In the financial services sector, political factors like concerns about regulations are linked to a lot of work in operational routines. This is especially true after the financial crisis. Due to their comparatively high costs, small banks and insurance companies have a particularly difficult time implementing and enforcing regulatory issues, as the experts interviewed stated (Hoole, 2012). These may at first appear if new technological systems and increased employee specialization are required to carry out the regulations. In addition to the previously mentioned negative effects, political factors (regulatory issues) have positive influences for the market leaders and act as a barrier for new competitors. Political factors are a significant driver of digital transformation in banks and insurance companies, according to research on the subject (Werth *et al*., 2020).

2.9.2 Economic Variables

The persistently low interest rate environment, which has had a significant impact on the sector as a whole, has been one of the key characteristics of this industry in recent years. The banking industry is clearly showing signs of consolidation, which will eventually lead to branch office closures and job cuts. However, the experts point out that the current level of competition in the banking industry is advantageous because

there is a reduced risk of the financial system collapsing. Because of low interest rates, shifting consumer demands, and the need for new product features, insurance companies, like banks, are under a lot of pressure to go digital (Werth *et al*., 2020).

2.9.3 Social Influences

Companies that provide financial services are constantly paying attention to social factors, which describe changes in socio-cultural aspects. Companies face difficulties on the demand side as a result of shifting consumer behaviour, and they are compelled to go through digital transformation, such as changing their customer interfaces. People are increasingly educating themselves and comparing financial products online (especially the so-called "Generation "Z"). The value chain of businesses must include this new technological approach (Schwarzbach, 2020). The intermediaries are most affected, particularly in sales. An intuitive online solution is more crucial for banking services because they are used more frequently, and this is more pronounced. These shifts in consumer behaviour do not necessarily indicate that consumers prefer that all products be sold exclusively online. Long-term products like construction financing or old age provision, for instance, are rather complex and frequently require individualized and personal guidance (Schwarzbach, 2020).

2.9.4 Technical aspects

Additionally, new technologies have the potential to expand business opportunities and promote digital transformation. While technology can potentially result in cost savings or more profitable ways of selling goods, there are also drawbacks like a lack of trust and the ensuing uncertainty (Cardona, 2020). Existing businesses frequently begin experimenting with these technologies, but they hardly ever integrate them into their regular operations. Consequently, it is crucial that these businesses embrace digital transformation and establish trust in the process.

2.10 The relationship between reskilling and digital transformation

The digitalisation of the banking industry is reaching its peak since it also incorporates other elements of Industry 4.0, such as blockchain networks, AI IOT, biometrics, bank partnerships with fintech firms, platform setup, and other services for Generation Z

and others (Mekinji´c, 2019). Technology-related factors are the biggest change agents in the banking business (World Economic Forum, 2020). According to the 2018 Mc Kinsey Global Institute Report “The task confronting every economy, particularly advanced economies, will likely be to retrain and redeploy tens of millions of mid-careers, middle-aged workers” (p3). This is uncharted territory and a new complex challenge as previous transformations took place over decades, if not centuries. There are few precedents in which societies have successfully retrained such large numbers of people, with the turnaround timelines that are expected. Numerous jobs are at risk of being replaced by digital technologies, intelligent automation, and AI due to the field's ongoing, rapid advancements.

A complex environment has emerged because of the pandemic's acceleration of change, endangering the readiness of many workers for the next digital age. Globally, the epidemic cost the equivalent of 255 million full-time jobs in 2020 and $3.7 trillion in lost income. Many of the jobs that were lost will not come back and the skills are irrelevant or redundant in a digital economy (Coursera Global Skills Report, 2021). Bersin (2021) postulates that bringing into focus the scale of the challenge that organisations are facing regarding reskilling and developing skills that can sustain meaningful work. Job losses in the hardest-hit areas during the pandemic include tourism, retail, and construction, while others like finance and technology saw positive job growth. A study in eight major economies indicated that about one in every sixteen workers will need to engage in a different occupation by 2030 (Johnson, 2021).

According to the World Economic Forum 2020 Report, in the coming years governments and private corporate companies will invest heavily into reskilling programmes, these will be amongst the largest ever undertaken. To support this transformation the World Economic Forum has initiated a platform that aims to provide one billion people with better education, skills, and jobs by 2030 (World Economic Forum, 2020). Reskilling programmes are a clear view of the organisations intent to develop its employees’ capabilities and their employability. These programmes are designed to advance the knowledge, the skills and the attitudes required to enhance personal and team performance and to support the business transformation. (PWC Talent trends, 2020). Additionally, it has been noted that worries about employment

losses due to technical developments have surfaced anytime an industrial revolution has occurred (Peters, 2017).

The future growth of organisations, workers and economies is becoming grounded in future-fit skills development initiatives. The corporate environment is drastically altering due to the digital revolution, and the banking industry is no exception. The study by Carbó-Valverde (2019) indicates that the change of corporate operations to digitalisation, corresponded with an improvement in human ability and skills. Employee productivity also grew by 30% to 40% in recent years, and new talent and skill requirements have emerged across all industrial sectors (Carbó-Valverde, 2019). Reskilling programmes play a critical role in helping workers keep pace with the accelerated digital transformation that came along with the pandemic (Coursera Global Skills Report, 2021).

According to the literature, the digitalisation of banking products and services will have to lower their operating costs, leading to job losses and a decrease in the number of personnel in the banking industry. The overview demonstrates that as the value of having an extensive network of bank branches declines, banks have continued to reduce their physical presence across Europe. The structural financial indicators reveal a continued drop of bank branches in the EU, with a member state average of 8.62%. In 24 of the 27 countries, there were reported contractions, with rates ranging from 2.28% to 30.66%. Most regions have noticed a trend of fewer bank staff since 2008. 3,233,000 employees in the EU existed in 2010; 2,622,723 existed in 2020. (ECB, 2021). Like the present trends in manufacturing, digitalisation is also altering the nature of the work in the banking and financial sectors (from both qualitative and quantitative perspectives).

In addition to utilising technology and cutting-edge tools to increase the effectiveness and efficiency of products, digitalisation has also changed customer behaviours. Customers' expectations have changed as a result, giving rise to a new breed of consumer who is always online, accustomed to using apps, and knowledgeable about

the possibilities and opportunities provided by technology. The digital society values real-time experience, usefulness, and looks to online banking and cashless payments for ease (Mbama, Cajetan & Patrick, 2018).

Banking clients, according to a KPMG (2020) report, expect banks to be a seamless part of their lives, provide automated, natural, and user-friendly ways to communicate, as well as cyber security and individualized customer financial management. The adoption of new technology should always consider the need for a workforce that will need time to adapt to the demands. The work done on data owning positions and the growing digitalisation of society account for a substantial share of these roles. Bringing people together to work in a single team that is involved individually in sales, design, marketing, and financing is becoming more and more common. Interdisciplinarity will speed up the production of products and solutions, but it also calls for shared team member competences. Due to this circumstance, there is a significant gap between the banking industry's current level of competence and its desired level. Banks are aware of this disparity. The main areas of improvement are in conceptual thinking, analytical skills, and information searching (Kwakwa & Cabral, 2021).

Reskilling and digital transformation are closely linked in the banking sector. As the banking industry becomes more digitally focused, the need for employees with digital skills increases. This means that reskilling initiatives are necessary to ensure that employees have the necessary skills to keep up with the changes in the industry. Reskilling programmes can help to facilitate digital transformation in the banking sector by providing employees with the necessary skills to adopt new digital technologies and processes (Kwakwa & Cabral, 2021). Reskilling initiatives can also help to create a culture of innovation and encourage employees to embrace new technologies and ways of working. On the other hand, digital transformation can also drive the need for reskilling. New digital technologies, such as automation and artificial intelligence, can lead to changes in job roles and requirements. This means that employees may need to develop new skills to keep up with these changes (Carbó-Valverde, 2019).

The relationship between reskilling and digital transformation in the banking sector is closely linked. According to Borzekowski and Cudé (2018), digital transformation can

drive the need for reskilling, as new digital technologies can lead to changes in job roles and requirements. This means that employees may need to develop new skills to keep up with these changes. Conversely, reskilling programmes can help to facilitate digital transformation in the banking sector by providing employees with the necessary skills to adopt new digital technologies and processes (Ibrahimi & Ahmed, 2013). Reskilling initiatives can also help to create a culture of innovation and encourage employees to embrace new technologies and ways of working (Mohamed, 2016). Thus, the relationship between reskilling and digital transformation in the banking sector is symbiotic, with each driving the need for the other.

The banking industry has seen the following developments, per research by (Accenture, 2021a):

1. lowering barriers to customer service;
2. utilizing Big Data, advanced analytics, and artificial intelligence;
3. enhancing integrated omnichannel support by implementing open API technologies;
4. expanding mobile payment adoption;
5. adjusting to regulatory changes;
6. examining cutting-edge technologies (Internet of Things, voice forwarding, blockchain);
7. the emergence of new challenger banks;
8. lowering barriers to customer service;

2.11 Conclusion

From the relevant literature reviewed, it is evident that reskilling contributes significantly towards digital transformation hence competitive edge. It is also becoming evident that reskilling positively influences the digital transformation, and the findings from several studies cited confirm this. The literature reviewed also revealed that most financial services used both financial and non-financial measures to evaluate digital transformation.

In the next chapter, the research methodology and design employed for the study is discussed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research is defined by Leedy and Ormrod (2015) as the procedure of gathering, analysing, and interpreting data with the intention of comprehending a phenomenon. The research orientation, research design, methodology, sampling, data collection, and analysis are all discussed in this chapter. More information about the study's planned quantitative methodology and research design was provided. Additionally, a plan for data collection, analysis, and measurement was presented. This chapter also assesses the scope of the research's validity and reliability, taking into account all ethical issues.

3.2 Research Design

A research design is defined as "a plan, structure, and strategy of investigation so conceived as to obtain answers to research questions or problems" by Kumar (2011:41). It is worth noting that the researcher is employed by a large financial services organisation.

Another term for research design is the development of a blueprint that facilitates the measurement, the collection and the analysis of all data that is gathered during the study (Sekaran & Bougie, 2016). By linking the research together through an organised and structured plan indicating the process, how the larger component of the research is orchestrated to assess the questions in the study, proper research design eliminates and prevents frustration. According to Kerlinger (1986:104) the essence of research design is to translate a research problem into data for analysis so as to provide relevant answers to research questions at a minimum cost.” The inductive approach is more suitable to qualitative research where data is non-numerical in nature (Collis & Hussey, 2009). A deductive approach enables the collection of data and the use of that data for analysis and testing of the research objectives. The deductive approach is accompanied by a quantitative research design, which is a

structured means of data collection (Quinlan, 2011). The deductive approach is a research methodology in which the researcher starts with a theory or hypothesis and then tests it through empirical observations (Bryman & Bell, 2019). This approach involves the use of a deductive reasoning process in which the researcher starts with a general theory and then develops a specific hypothesis to test based on that theory (Creswell, 2014). The researcher then collects and analyses data to test the hypothesis and ultimately confirm or reject the original theory.

The deductive approach is commonly used in quantitative research designs, which aims to measure and quantify variables and test hypotheses through statistical analysis (Creswell, 2014). The deductive approach is particularly well-suited to studies in which the research question is well-defined, and the variables of interest can be operationalised and measured quantitatively (Bryman & Bell, 2019). Overall, the deductive approach is a structured and systematic way of conducting research that allows researchers to test theories and hypotheses in a rigorous and objective manner. However, it may also limit the researcher's ability to explore unexpected findings or phenomena that do not fit neatly within the original theory (Creswell, 2014).

A deductive approach was used to examine the role of reskilling programmes on digital transformation at a major financial services company due to several reasons. Firstly, a deductive approach allows for the formulation of a hypothesis or research question based on existing theory or previous research, which can then be tested through data collection and analysis. In this case, existing literature has highlighted the importance of reskilling programmes in supporting digital transformation, and the study sought to test whether this was also the case for a major financial services company.

Secondly, a deductive approach is appropriate when the research aims to generalize findings to a larger population beyond the specific context of the study. As the study aimed to examine the role of reskilling programmes on digital transformation at a major financial services company, the findings would have implications for other companies in the same industry.

Lastly, a deductive approach involves the use of structured data collection methods, such as surveys or questionnaires, which can be used to measure specific variables

and test hypotheses. This was important for the study as it allowed for the collection of data on the effectiveness of the reskilling programmes and their impact on digital transformation, which could then be analysed using statistical methods to draw conclusions.

3.3 Research Approach

The research approach is a plan and procedure that consists of the steps of broad assumptions to detailed methods of data collection, analysis, and interpretation. In the next section, three basic research approaches that is quantitative, qualitative and mixed methods are outlined

3.3.1 Quantitative

According to Johnson and Onwuegbuzie (2014:18), quantitative research focuses on deduction, confirmation, concept/hypothesis testing, explanation, prediction, standardised fact series and statistical analysis. A deductive approach (which is consistent with quantitative research) is concerned with “developing a hypothesis (or hypotheses) based on existing theory, and then designing a research strategy to test the hypothesis. Amaratunga (2012:19) emphasises that the quantitative method grows out of a strong academic culture that places great emphasis on numbers that represent overviews or concepts. Borkan (2014:4) advocates the concept that equipment for collecting quantitative statistics allows the researcher to draw the simplest approximation of what she or he is investigating, and that statistical techniques can be good for disentangling or identifying correlates associated with versions in certain moments in time. Johnson and Onwuegbuzi (2014:18) argue that quantitative research specialises in deduction, prediction, standardised data series and statistical analysis.

3.2.3 Qualitative

Berg and Lunn (2018:78) argued that qualitative facts are associated with meanings. Qualitative research can be the right approach to research that uses a non-probable sample, attractive to respondents through semi-structured interviews, which allows for additional statistics, offering awareness and readability to the study (Creswell,

2014:100). Inductive approach (which is consistent with qualitative research), also known in inductive reasoning, starts with the observations and theories are proposed towards the end of the research process as a result of observations. Inductive research “involves the search for patterns from observation and the development of explanations – theories – for those patterns through series of propositions. Qualitative research is characterised by its use of pastimes that rely on item information, as well as strategies that (in the well-known) generate terms, rather than numbers, as information for evaluation (Creswell, 2013:24). Qualitative research typically attempts to understand the research and attitudes of social workers.

3.2.3 Mixed Methods

According to Creswell and Clark (2016:123), mixed methods research designs involve one qualitative and one quantitative method. This form of research design allows the researcher to use a series of qualitative and quantitative methods to search for answers to understand the phenomenon. Terrel (2012:45) defines a mixed method approach as research that follows a pragmatic approach that integrates qualitative and quantitative approaches at different stages of the research process. This definition emphasises the paradigm position and data integration. From the perspective of Terrel (2012:67), the researcher concludes that this approach combines the good qualities of qualitative and quantitative approaches.

The quantitative method was used because it allows potential estimation and sound implementation and therefore a rigorous evaluation of the quantitative hypothesis; it enables the evaluation of multiple datasets and hypotheses, faster and more accurately than any human brain and takes time to manually execute ideas that can be executed automatically and rapidly. In this study a quantitative research design was employed. The use of quantitative research in this study allowed for the measurement of variables and the identification of patterns and trends, which can aid in understanding the role of reskilling programmes in digital transformation (Fryer, Larson-Hall & Stewart, 2018).

3.4 Research Philosophy

A review of philosophy is an important component of the research process. This review will both open the mind of the researcher to other possibilities as well as enhance their confidence that the methodologies that are being used are appropriate (Holden & Lynch, 2014). In the development of a philosophical perspective for this research the researcher needs to make several core assumptions concerning two primary dimensions, those being: the nature of science and the nature of society.

3.4.1 Ontology

Ontology plays an important role in research as it helps to define the nature of reality, the types of entities that exist in the world, and the relationships between them. In research, ontology is often used to guide the development of research questions, the design of research methods, and the interpretation of research findings. In this discussion, we will explore the role of ontology in research and its implications for research practice.

Ontology in research refers to the researcher's assumptions about the nature of reality and the types of entities that exist in the world. Ontology is closely linked to epistemology, which refers to the study of knowledge and how it is acquired. The way in which a researcher conceptualizes reality will influence their choice of research questions, research methods, and the interpretation of research findings. This means that ontology is a fundamental part of the research process and should be carefully considered when designing a research study (Creswell, 2014).

One of the key debates in ontology is whether the world is composed of objective entities that exist independently of human perception, or whether reality is socially constructed and subject to interpretation. This debate has important implications for research practice, as it shapes the way in which research questions are formulated, and the way in which data is collected and interpreted. For example, a researcher who believes that reality is objective may design a study that seeks to discover universal laws or patterns in the world, whereas a researcher who believes that reality is socially

constructed may design a study that seeks to understand how individuals interpret and construct their own reality (Creswell, 2014).

Ontology also influences the choice of research methods. A researcher who believes that reality is objective may use quantitative methods to collect data, as the researchers are seen as more objective and reliable. In contrast, a researcher who believes that reality is socially constructed may use qualitative methods, such as interviews or observations, to collect data that capture the rich, subjective experiences of participants. It is important to note that there is no one "right" way to conduct research, and the choice of research methods should be based on the research question, the type of data that is needed, and the researcher's ontology. The interpretation of research findings is also influenced by ontology. A researcher's assumptions about the nature of reality will shape the way in which they interpret the data and draw conclusions. For example, a researcher who believes that reality is objective may be more likely to interpret their data in terms of cause-and-effect relationships, whereas a researcher who believes that reality is socially constructed may be more likely to focus on the multiple meanings and interpretations of the data (Creswell, 2014).

Ontology is a key aspect of research that shapes the development of research questions, the choice of research methods, and the interpretation of research findings. It is important for researchers to reflect on their assumptions about the nature of reality and to be explicit about their ontology when reporting research findings. This will help to ensure that research is transparent, rigorous, and meaningful, and that it contributes to our understanding of the world in a way that is grounded in sound philosophical principles.

The ontology for this research is comprised of several classes, properties, and instances that reflect the key concepts and relationships within the domain of reskilling and digital transformation. The classes include reskilling programmes, digital transformation, organisational change, employee training, technology adoption,

workforce development, innovation, skill acquisition, performance improvement, and business strategy. The instances include various types of reskilling programmes, such as coding bootcamp, digital literacy training, cloud computing certification, and agile methodology training, as well as concepts such as digital culture change, customer-centric design thinking, talent management, job-embedded learning, and performance metrics.

The research was objectivist in nature, given the quantitative methods used to investigate the role of reskilling programmes on digital transformation in a large financial services organisation. Based on the research questions provided, the study was quantitative in nature, as it involved measuring and analysing numerical data to answer specific research questions. The use of quantitative methods is often associated with an objectivist research approach, which seeks to produce knowledge that is independent of personal biases and experiences. In this study, the researcher investigated the role of reskilling programmes on digital transformation in a large financial services organisation, and the research questions focused on identifying and measuring the effects, relationships, and reasons behind this phenomenon. There was a need for objective and empirical data to provide evidence-based answers to these research questions.

3.4.2 Epistemology

Epistemology is the study of knowledge and how it is acquired, evaluated, and justified. It is concerned with understanding the nature, scope, and limitations of knowledge, as well as the criteria for determining what is true or false. Epistemology has important implications for research, as it shapes the way in which researchers approach their study and interpret their findings. In this discussion, the researcher explores some key concepts and debates in epistemology and their relevance to research practice.

One of the fundamental debates in epistemology is whether knowledge can be certain or if it is always subject to doubt and uncertainty. This debate has been explored by philosophers such as Rene Descartes and Immanuel Kant, who argued that knowledge could be certain through the use of reason and intuition, and others such as David Hume and Ludwig Wittgenstein, who emphasized the limitations of human knowledge and the role of language and culture in shaping our understanding of the world (Creswell, 2014).

Another important concept in epistemology is the distinction between *a priori* and *a posteriori* knowledge. According to Kornberger, Pflueger and Mouritsen (2017), a priori knowledge refers to knowledge that is independent of experience, such as mathematical and logical truths, while a posteriori knowledge refers to knowledge that is based on experience, such as empirical observations and scientific data. This distinction is relevant to research, as it shapes the choice of research methods and the interpretation of research findings. The issue of objectivity and subjectivity is also central to epistemology (Van Houten & Reinders,2020). Objectivity refers to the idea that knowledge can be independent of personal opinions and biases, while subjectivity refers to the role of personal perspectives and interpretations in shaping our understanding of the world. This issue is particularly relevant to social sciences research, where the subjectivity of the researcher and the participants can play a significant role in shaping the research process and outcomes (Kumar, 2019).

Epistemology also explores the nature of evidence and justification. It asks questions such as what counts as evidence, how evidence should be evaluated, and what criteria should be used to justify a belief or claim. This issue is particularly relevant to research, where the quality of evidence and the validity of conclusions are critical to the credibility and impact of the study. Furthermore, epistemology has an impact on research methodologies (Crotty, 2017). It can influence the type of research questions being asked, the types of data collected and analysed, and the criteria used to assess the quality of the research. Thus, researchers must be aware of the underlying epistemological assumptions of their research (Crotty, 2017).

Epistemology is a complex and multifaceted field that has important implications for research practice. Understanding the key concepts and debates in epistemology can help researchers to develop a sound philosophical foundation for their research, and to make informed decisions about the choice of research methods, the interpretation of findings, and the justification of claims (Hammersley, 2018). Epistemology is concerned with the nature, sources, and limits of knowledge, and it provides a framework for understanding how knowledge is generated, tested, and disseminated in different contexts.

In this research project, a quantitative approach is used to investigate the role of reskilling programmes on the digital transformation at a large financial services organisation, and the epistemology as a research philosophy is utilised to understand the nature of knowledge and how it can be acquired and validated in this context.

The epistemology as a research philosophy provides a framework for understanding how knowledge is generated, tested, and validated in the context of investigating the role of reskilling programmes on the digital transformation at a large financial services organisation. The positivist approach emphasises the importance of empirical observation, measurement, and statistical analysis to develop scientific explanations and predictions about the relationships between variables, and it guides the research methodology and analysis in this study. The use of quantitative methods allows for precise measurement and analysis of the data, and it aligns with the positivist perspective on the nature and limits of knowledge (Bryman, 2017).

3.4.3 Axiology

Axiology is a branch of philosophy concerned with values, including moral values, aesthetic values, and social values. In research, axiology refers to the researcher's assumptions about the importance of values in the research process. Axiology plays an important role in guiding the design of research studies, the collection and analysis of data, and the interpretation of research findings.

One of the main ways in which axiology influences research is in the choice of research topics. Researchers often choose topics that are personally meaningful to them or that align with their values or beliefs. This researcher values education, learning and development as a tool that can empower and lift society as a whole and has therefore chosen to study issues related to the reskilling and upskilling of the workforce. The researcher's values and beliefs may also influence the research question and the interpretation of the findings. This highlights the importance of being transparent about the researcher's axiology and the potential biases that may exist in the research (Schwandt, 2015).

Axiology also plays a role in the design of research studies. Researchers may choose to use research methods that align with their values or that allow for the exploration of values. For example, a researcher who values the voices and experiences of marginalized groups may choose to use participatory research methods that involve these groups in the research process. Similarly, a researcher who values ethical considerations may choose to use qualitative research methods that allow for a deep exploration of ethical issues. In the collection and analysis of data, axiology is reflected in the types of data that are collected and the way in which they are analysed. To gain insight into the role of reskilling in the digital transformation process, this study placed a high value on understanding the various contexts that influence the research outcomes. Therefore, the researcher opted to utilise quantitative data analysis methods, which provide a comprehensive exploration of these contexts (Creswell & Poth, 2018). The interpretation of research findings is also influenced by axiology. The researchers' values and beliefs shape the way in which they interpret the data and draw conclusions. For example, a researcher who values the importance of individual agency may interpret data in terms of individual choice and decision-making, while a researcher who values the importance of social structures may interpret data in terms of the ways in which social structures shape individual behaviour (Creswell & Poth, 2018). This research places a significant emphasis on the influence of context and social structures on individual behaviour within the workplace. As such, cross-tabulation is the preferred quantitative data analysis method, as it allows for the

exploration of inferences between different data sets within the research study through a basic tabular format. This method is ideal for displaying information that is either mutually exclusive or has some connection to one another, making it a useful tool for identifying patterns and relationships within the data (Creswell & Poth, 2018).

Axiology also has implications for the dissemination of research findings. Researchers may choose to disseminate their findings in ways that align with their values and that are meaningful to their intended audiences. For example, a researcher who values the importance of community engagement may choose to disseminate their findings in community-based settings, while a researcher who values the importance of policy change may choose to disseminate their findings to policymakers (Kumar, 2019).

In this study, axiology played an important role in shaping this researcher process when selecting the choice of research topic to the dissemination of the research findings. The research methodology for this study follows a positivist approach and involves collecting and analysing data using a structured survey instrument to understand the impact of reskilling programmes on the digital transformation at a large financial services organisation (Hammersley, 2018). The survey instrument is designed to measure the attitudes, perceptions, and behaviours of employees who have participated in reskilling programmes and to identify the factors that contribute to the success or failure of these programmes. The data is analysed using statistical methods, such as regression analysis, to test the research hypotheses and to identify the relationships between the variables (Evers and Lakomski, 2017).

The axiology as a research philosophy provides a framework for understanding the values and ethical considerations that underpin the research process and outcomes in the context of investigating the role of reskilling programmes on the digital transformation at a large financial services organisation using a quantitative approach (Crotty, 2017). The objectivist approach emphasises the importance of validity, reliability, and generalisability of research findings, and it guides the research design and methodology in this study. The use of a structured survey instrument and

statistical methods allows for a rigorous and objective analysis of the research questions and aligns with the objectivist perspective on the nature and evaluation of values. Ethical considerations, such as informed consent and confidentiality, are also central to the positivist approach and are reflected in the research design and implementation (Evers & Lakomski, 2017).

3.5 Population and Sampling Strategy

For the purposes and processes of research it is important to understand the difference between population and sample. Crotty (2017:66) defines the term population as “all members that meet a set of specifications or a specified criterion.” An element is the single member of any population and when some elements from a population are selected, we refer to that as a sample (Datta, 2018). The target group for this study consisted of 328 employees in the study area. Samples are categorised as either a probability sample or a non-probability sample. For the purpose of this study, probability sampling techniques are discussed in detail.

Probability sampling can be further broken down into simple sampling or complex probability sampling. “Random sampling uses the law of statical regularity which states that if on average the sample chosen is a random one, the sample will have the same characteristics and characteristics of the population” (Kothari:87). Bricklayer (2012) suggested that probability sampling systems can be recognized as:

There are various types and methods of probability sampling used during this research.

1. Simple Random Sampling – The population must be homogenous, i.e., every element must meet the characteristics of the described population and every element of the population must have an equal chance of being selected for the sample.
2. Systematic Random Sampling – Unlike random sampling there is not an equal chance for every element of the population to be included. Regularity and uniformity in the selection makes the sampling systematic and systematic selection is done at regular intervals.

3. Stratified Random Sampling – This sampling method is used when the population is heterogeneous, and the elements differ from one another in characteristics. Sub-groups are formed that are homogeneous, these subgroups are called as strata.

4. Cluster Sampling – This sampling technique is used when the elements of population are spread over a wide geographical area. The population is divided into sub-groups called as clusters based on their geographical dispersion.

5. Multistage Sampling – This is a combination of two or more probability techniques are combined and can be described as sampling within the sample. This technique can be employed when it is not possible to obtain a representative sample with only one mentioned sample technique.

Simple random sampling was used in this study because it was the least expensive method and made it simple to choose study participants. Using a range of employees who have been impacted by digital transformation and who have been participants in reskilling programmes, subjects from the population were chosen at random for sampling.

According to Zamboni (2018), sample size measures the actual number of samples measured or the number of observations made. According to Sekaran and Bougie (2014), a sample size of 178respondents was randomly selected was used at 95% confidence level for a population consisting of 328 units/items. The Sekaran and Bougie (2014)'s table suggests the optimal sample size given the population size, certain margin of error and desired confidence interval. Due to organisational research protocols and guidelines, the researcher was limited in the number of participants who could be included in the study.

3.6 Data Collection Instrument

Quantitative research tools include questionnaires, surveys, structured interviews, and behavioural observations based on precise coding and categorization schemes (Farnsworth, 2019). In this quantitative study, data was collected using a structured questionnaire (closed-ended questions) (Allien, 2016).

For this study a closed questionnaire was used to gather data from the sample respondents. The respondent was requested to fill out and submit an online questionnaire as a way of gathering data. Questionnaires can be used in conjunction with other research tools or as the only instrument. With careful planning, questionnaires can yield highly valuable data, have high response rates, and ensure anonymity, the latter of which encourages responses that are more truthful and genuine and bias may be significantly reduced as a result (Marshall, 2015).

The questionnaire was distributed to participants along with a cover letter (letter of consent) indicating the personal method of data collection. Structured closed questions allowed respondents to simply select from a range of alternatives presented, and a 5-point Likert scale was used as a measuring instrument in this regard (Kelly & Lesh, 2012).

3.7 Data Analysis

According to Saunders, Lewis, and Thornhill (2012), data analysis is used to describe facts, identify patterns, develop hypotheses, and test them. In data analysis, the raw data (information that has not been processed) is organized so that valuable information can be extracted from it. On Microsoft Excel spreadsheets, the information from the 86 fully completed questionnaires in this study was recorded and coded. The results are displayed in graphs and tables after the data was run through the Statistical Package for the Social Sciences (SPSS) version 28 software.

The quality of the results of any study are only as good as the instruments developed and how accurately the data is collected, and the variables measured. Therefore, the dependability and legitimacy of the data measurement instruments are of critical importance. According to Sekeran and Bougie (2016), the dependability of an instrument is a gauge of how constant the instrument is at measuring what it is intended to measure.

3.8 Validity and Reliability

In general, reliability refers to how consistently a variable or set of variables measures the thing it was designed to measure. Additionally, it refers to how well scores can be generalized to other measuring contexts and how free of random errors the measurement process is (Laura & Bernaur, 2014). To determine whether or not the same results are obtained, reliability would typically be tested by using the same instrument at various times. However, this is not practical, so Cronbach's alpha was used to evaluate the instrument's dependability. An alpha score greater than 0.70 must be obtained for the measuring device to be considered reliable (Bryman & Bell, 2015). The Cronbach's alpha coefficients of the constructs in this questionnaire were all higher than 0.70, indicating that the measurements had acceptable internal consistency.

The degree to which both systematic and random errors are absent from the measurement process is known as its validity. It speaks to how accurately the data reflect what they are intended to reflect (Creswell, 2012). Validity does not refer to the test itself but rather to the results of the test. When conducting quantitative research, the key question is whether it is possible to draw meaningful conclusions from a study given the controls and research design that were used (Ihantola & Kihn, 2011). Murthy and Bhojanna (2010) state that the following requirements should be met by a valid questionnaire:

1. Relevant: Did the questionnaire collect the data it was intended to?
2. Complete: Was the desired information obtained in its entirety?
3. Trusted: Can the answers to the questions be trusted to be accurate?

In order to determine whether the questionnaire covered the study objectives, the face validity of the instrument was examined by experts (in the fields of learning and development). Their comments helped us make the questionnaire better. A study was carried out among 7 chosen employees to increase the validity of the questionnaire.

The sample size of 86 employees in the sample did not include the ten participants in the pilot study.

3.9 Pilot Study

A pilot study, according to Enago Academy (2019), is required in any research, quantitative or qualitative. It is typically used to reach out to a small group of respondents in order to identify any flaws in an instrument, and the same instrument was used in a larger study with a larger number of respondents. According to Crossman (2019), a pilot study is a small study of a larger study that helps the researcher gain a much better understanding before conducting a larger study. A small study allows the researcher to fine-tune both the subject and the research methods (Corssman, 2019). A pilot study will also reveal whether or not the study is feasible (Enago Academy, 2019).

In this study, 7 respondents (from among employees) were chosen at random to participate in the pilot study.

3.10 Ethical Considerations

Wild and Diggines (2010) define ethics as commonly accepted standards of right and wrong behaviour. Bryman (2017) asserts that the attention of ethical problems in carrying out studies is essential because to keep away from unanticipated harm or pain to other people. Bryman (2017) identified confidentiality, permission to conduct look at, protection from damage, protection of respondent's anonymity as vital moral troubles that needs to be respected before and at some point, of the research procedure.

3.10.1 Ensuring participants have given informed consent

To provide informed consent, participants must understand the nature of the study and its potential outcomes (Barbour, 2017). Before proceeding, all participants were fully informed of the potential consequences of their participation in the study and were asked to sign a waiver form. A consent statement or agreement at the beginning of the survey. The consent statement should explain the nature of the survey, the

purpose of the research, and any potential risks or benefits to the participants. It should also inform participants of their right to withdraw from the survey at any time and how their data was used and stored.

3.10.2 Ensuring that participants are safe from harm

All necessary precautions were taken to keep participants in the research safe from physical and psychological harm (Banks, 2018). To avoid psychological harm the researcher removed any offensive or sensitive language from the research instrument. This means that the language used in the questionnaire was very respectful, non-judgmental, and free from any language that could be considered discriminatory, inflammatory, or triggering. In addition, the researcher also ensured that participants were aware of their rights and responsibilities as research participants.

3.10.3 Ensuring confidentiality and anonymity

Confidentiality entails that the researcher knows the identity of the participants but hides information that identifies them while anonymity means that, the investigator does not know who respondents are (Kalof, Dan, Dietz, Guagnano & Stern, 2018). To achieve this, the researcher did not disclose the real identity of the participants but used code names to represent participants such as participant 1 or participant 2. The researcher used secure servers to store and protect data collected during the survey. This includes protecting data from unauthorised access, such as through the use of encryption or password protection. Records are also stored digitally in a database that requires login credentials to access. The data will be destroyed after a 5-year period.

3.10.4 Ensuring that permission is obtained

According to Banks (2018), obtaining permission entails requesting permission to conduct research on an institution such as the large financial services organisation. Permission was obtained from the large financial services organisation in this regard. Appendix A is attached.

3.11 Conclusion

As illustrated in the preceding section, it is noteworthy that the researcher in this chapter relied mostly on the research methodologies employed in this study's primary research. The chapter began with a short introduction emphasising the subject of the subsequent talks, and then moved on to the methodology's logic. Attention was also given to the significance of this investigation. Moreover, the chapter has discussed the ethical considerations that were taken into account in the design of the study, such as ensuring informed consent, confidentiality, anonymity, and minimising the risk of harm to participants. The chapter has also highlighted the limitations of the research methodology and design, such as the potential for response bias and the limited generalisability of the findings.

CHAPTER FOUR

FINDINGS

4.1 Introduction

The findings of the empirical study are presented, analysed, and discussed in this chapter. For the quantitative data collected via questionnaire responses, the results are presented using descriptive statistics in the form of graphs, tables, and charts. To identify important patterns and relationships, a variety of appropriate statistical tests were used to analyse and interpret the data collected from completed questionnaires.

4.2 The Response Rate

Due to organisational research protocols and guidelines, the researcher was limited in the number of participants who could be included in the study. The researcher distributed 178 questionnaires to various employees within the organisation. A total of 86 completed questionnaires were returned. This equates to a 49.16% response rate. The empirical research findings are presented, analysed, and discussed below, in the order of the questions in the research instrument.

4.3 Socio-Demographic Results

Demographic data is required to obtain important information about the respondents. Socio-demographic data allows for more accurate analysis of results and identifies differences in responses by subgroups such as ethnicity and educational background. Respondent demographics such as age, gender, ethnicity, education level, years of experience, location, and job duties are discussed.

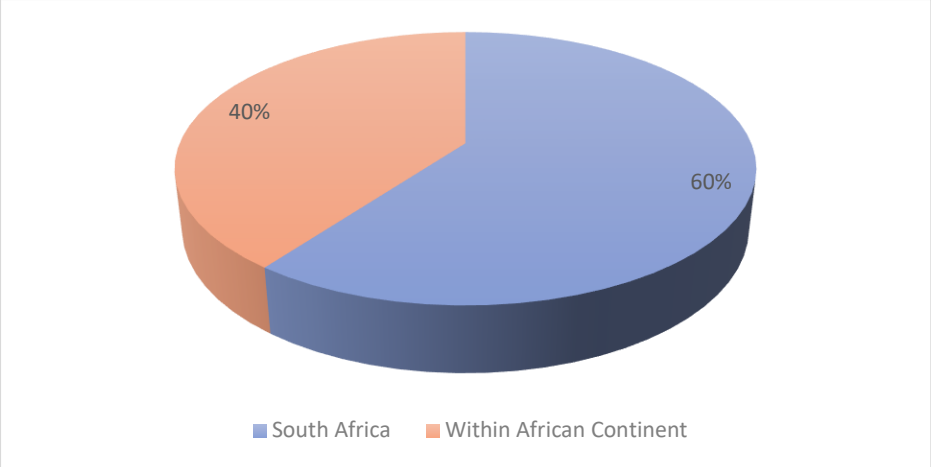

Figure 4.1: Location of respondents

The majority of respondents (60.2%) were residing in South Africa**.**

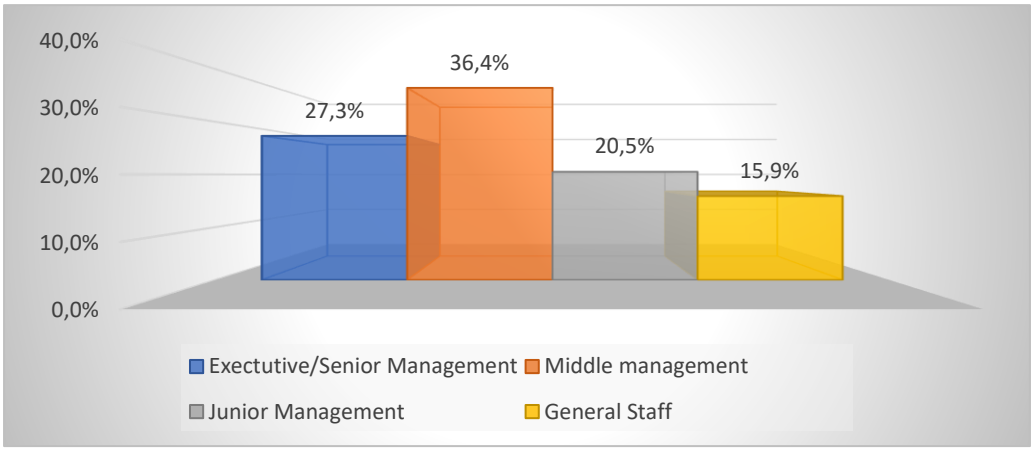

Figure 4.2: The position level

In terms of the position level, the majority of respondents (63.7%) were either executive/senior management (27.3%) or middle management (36.4%) as presented in Figure 4.2.

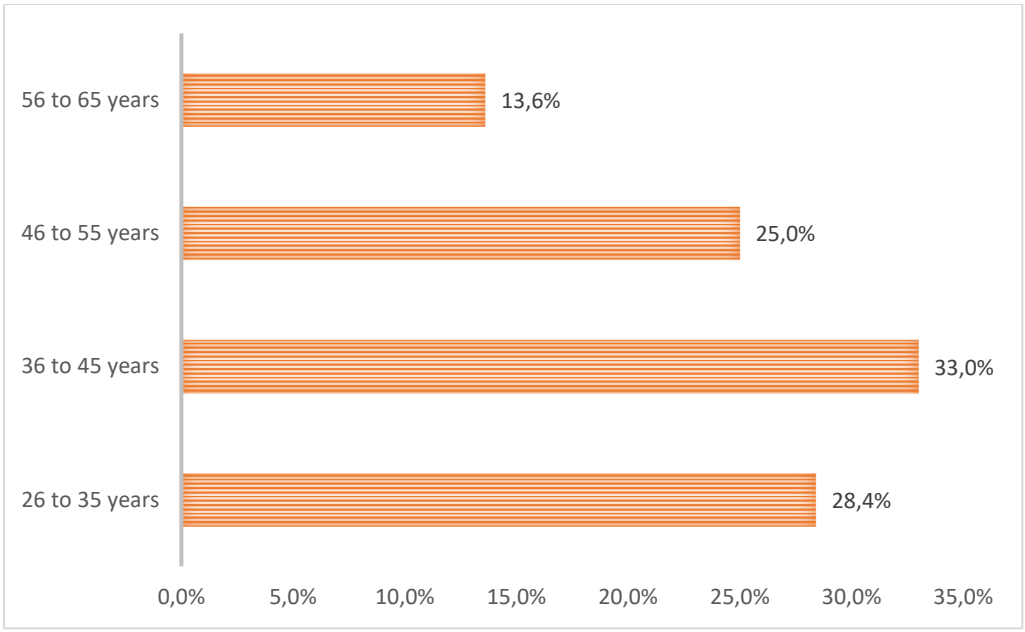

Figure 4.3: Age group of the respondents

In analysing the results displayed in Figure 4.3, the largest respondents (33%) fell in the age range 36-45 years. This was followed by 28.4 percent in the range 26-35 years old. Then, 25 percent of the respondents were in the range 46-55 years, and finally 13.6 percent were 56-65 years.

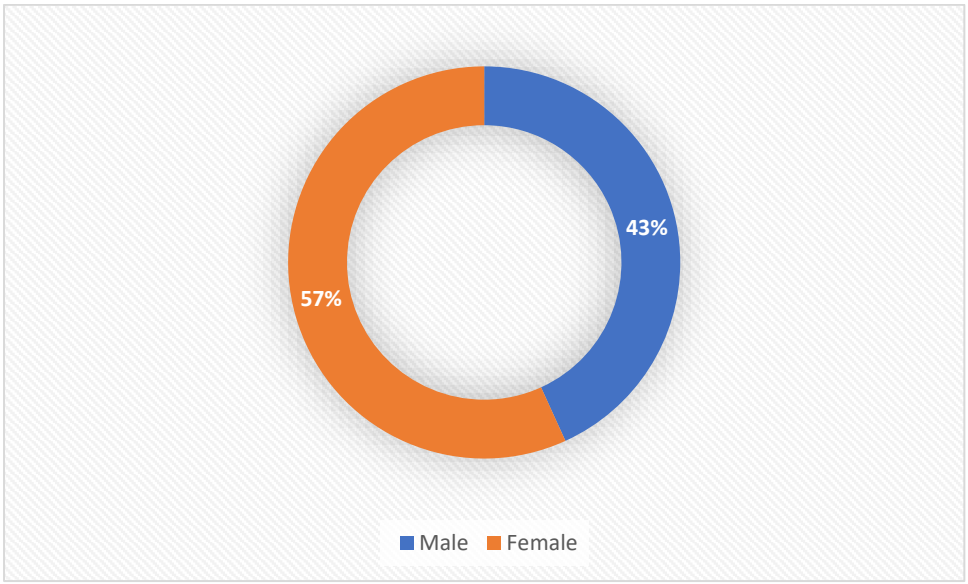

Figure 4.4: The gender distribution of the respondents

The majority of the respondents (56.2%) were females (Figure 4.4)

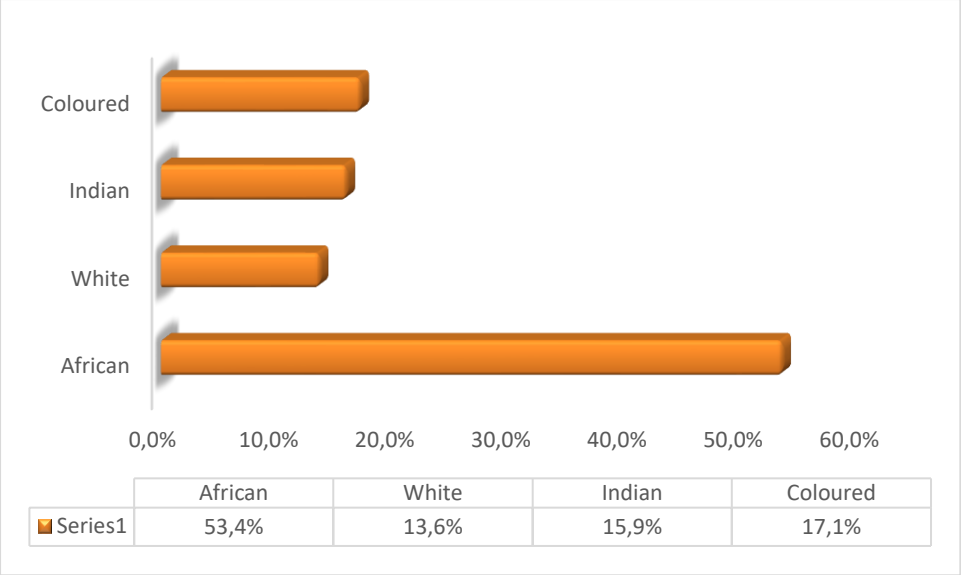

Figure 4.5: Ethnicity distribution of the respondents

The respondents compromised mainly of Africans, Coloureds, Whites and Indians, together being 100% of the respondents

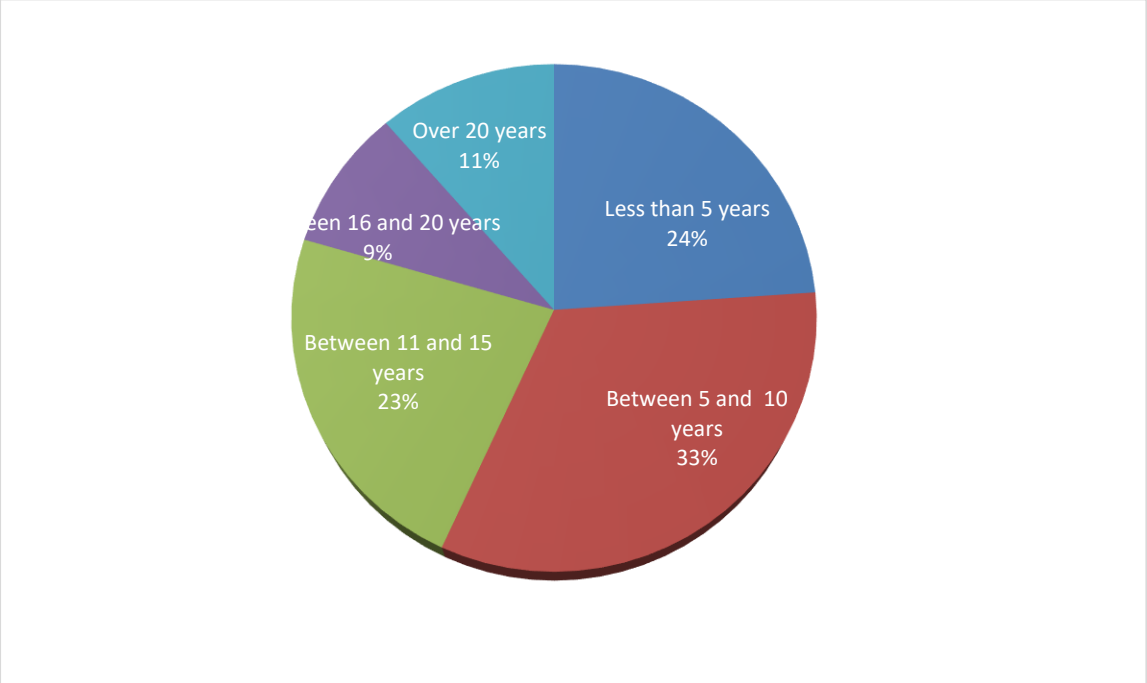

Figure 4.6: Distribution of work experience of respondents

As it can be seen from the Figure 4.6, 33% of the respondents have been employed by the organisation for a period between 5- 10 years and the least respondents (9.1%) of the respondents have been in operation for a period between 16- 20 years.

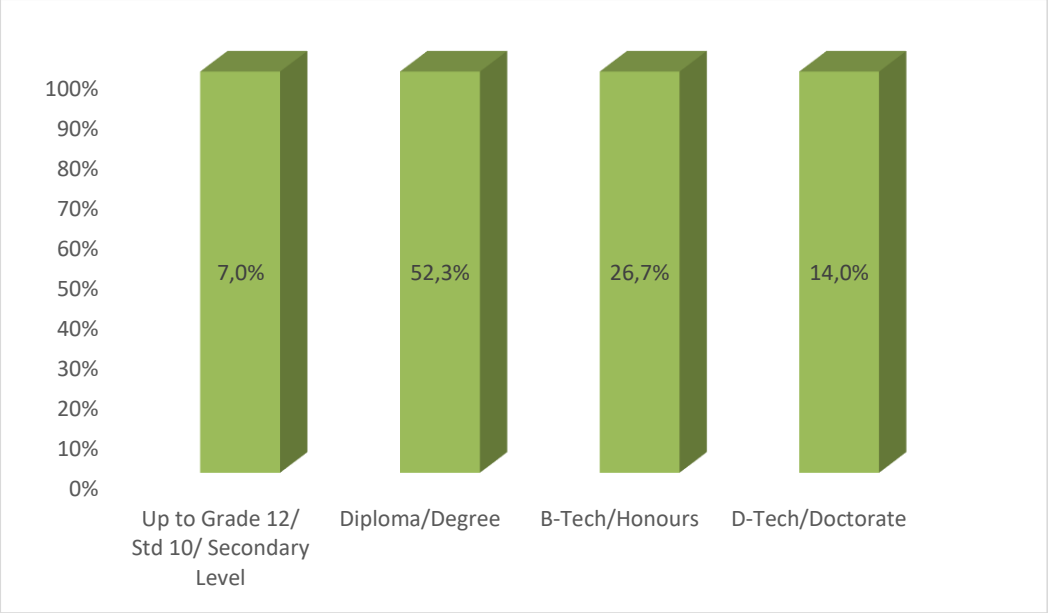

Figure 4.7: Distribution of Education Level of respondents

In terms of education qualification, the majority of respondents (52.3%) possessed diploma/degree, while a small percentage (7%) only had grade 12/Std 10/Secondary level.

4.4 The effects of digital transformation on jobs in the financial services sector

The aim of the question was to analyse the types of roles that are most value in an organisation that is going through digital transformation. The researcher used a five-point Likert scale ranging from (1) strongly valued to (5) strongly not valued and the results from the respondents are discussed below.

Table 4.1: The value of job Roles

Job role	strongly Valued	Valued	Neutral	Not Valued	Strongly Not Valued	Total
Operational Roles	31,4%	45,3%	16,3%	7,0%	0,0%	100%
Insight-driven Roles	46,5%	51,2%	1,2%	1,2%	0,0%	**100%**
Mono-skilled Roles	2,3%	41,9%	40,7%	15,1%	0,0%	**100%**
Multi-skilled Roles	41,9%	39,5%	16,3%	2,3%	0,0%	**100%**
Generalist Roles	26,7%	55,8%	17,4%	0,0%	0,0%	**100%**
Specialised Roles	37,2%	48,8%	12,8%	1,2%	0,0%	**100%**
Technology-Orientated Roles	44,2%	45,3%	9,3%	1,2%	0,0%	**100%**
Creative Roles	11,6%	32,6%	27,9%	27,9%	0,0%	**100%**

Results indicated that majority of the respondents (76.7%) either strongly valued (31.4%) or valued (45.3%) operational roles. In terms of insight driven roles, the majority of respondents (97.7%) either strongly valued (46.5%) or valued (51.2%). Table 4.1 reveals that the largest respondents (41.9%) either strongly valued mono-skilled roles and the respondents who were neutral constituted (40.7%). Results indicated that a total of 81.4% of the respondents either strongly valued (26.7%) or valued (55.8%) the multi-skilled roles. In terms of gauging the value generalist roles, Table 4.1 indicates that majority of respondents (82.6%) either strongly valued (26.7%) or valued (55.8%) this kind of job. Table 4.1 indicates that the majority of respondents (86%) either strongly valued (37.2%) or valued (48.8%) specialised roles. In terms of the value of technology-orientated roles a total of 89.5% of the respondents either indicated they strongly value (44.2%) or value (45.3%). Lastly, Table 4.1 indicates that the majority of respondents (55.8%) either were neutral or not valued on creative roles.

Table 4.2 The importance of key variables to job roles

Variable	Very Important	Important	Neutral	unimportant	Very unimportant	Total
Face-to-Face Customer interaction is crucial	59,3%	40,7%	0,0%	0,0%	0,0%	100%
Implementation of Continuous Improvement Processes	52,3%	44,2%	1,2%	2,3%	0,0%	**100%**
Access to a Modernize infrastructure	47,7%	51,2%	1,2%	0,0%	0,0%	**100%**
Digital Customer interaction is Crucial	50,0%	50,0%	0,0%	0,0%	0,0%	**100%**
Leveraging Power of Data and Analytics	57,0%	41,9%	1,2%	0,0%	0,0%	**100%**
Working Remotely	16,3%	52,3%	30,2%	1,2%	0,0%	**100%**
Reskilling Programmes	46,5%	51,2%	2,3%	0,0%	0,0%	**100%**
Hybrid Working Conditions	44,2%	45,3%	10,5%	0,0%	0,0%	**100%**

As shown in Table 4.2 above, regarding the statement "*Face-to-Face customer interaction is crucial*", all respondents (100%) indicated that it was either very important (59.3%) or important (40.7%). Table 4.2 reveals that in terms of implementation of continuous improvement processes in the job roles, the majority of respondents (96.5%) indicated either it is very important (52.3%) or important (44.2%) for the implementation of continuous improvement processes in the job roles. Regarding the importance of access to a modernise infrastructure, an analysis of the responses indicated that a total of 98.8% of the respondents revealed that it was very important (47.7%) or important (51.2%) for them to exercise respect (Table 4.2). Regarding the digital customer interaction as crucial, the results in Table 4.2 indicate that all respondents indicated it was either very important (50%) or important (50%). Table 4.2 also reveals the responses gathered on the importance of leveraging power of data and analytics, a total of 98.8% of the respondents indicated that it was very important (57%) or important (41.8%). Additionally, Table 4.2 indicates that in terms

of working remotely, more than two thirds of the respondents (68.6%) indicated either it is very important (16.3%) or important (52.3%) to work remotely. As shown in Table 4.2 above, regarding the importance of reskilling programmes, a total of 97.7% of the respondents indicated that it was either very important (46.5%) or important (51.2%). Table 4.2 reveals that in terms of hybrid working conditions, the majority of the respondents (89.5%) indicated either it is very important (44.2%) or important (45.3%) in this regard.

4.5 The effectiveness of workforce reskilling programmes

In this study a five-point Likert scale, ranging from strongly agree (1) to strongly disagree (5), was used to ascertain the effectiveness of workforce reskilling programmes and how they agreed/disagreed with the statements, and the results are reflected in Table 4.3 below.

Table 4.3: The effectiveness of workforce reskilling programmes

Statement(s)	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Our reskilling programmes provide opportunity for improving D&I	27,9%	58,1%	9,3%	4,7%	0,0%	100%
Our reskilling programmes are effective in attracting and retaining talent	19,8%	50,0%	23,3%	7,0%	0,0%	**100%**
Our reskilling programmes reinforce the purpose and importance of the human touch	9,3%	55,8%	20,9%	14,0%	0,0%	**100%**
Our reskilling programmes are clearly aligned to the Digital Transformation Strategy	26,7%	46,5%	26,7%	0,0%	0,0%	**100%**
Our reskilling programmes have increased my levels of confidence to	20,9%	55,8%	23,3%	0,0%	0,0%	**100%**

adopt digitalisation as a core business practice						
As an employee, I am being equipped with correct skills to transit into an organisation that is increasingly automated	14,0%	58,1%	18,6%	9,3%	0,0%	**100%**
Our reskilling programmes have equipped me with correct skills that I am applying in my current job	9,3%	44,2%	31,4%	15,1%	0,0%	**100%**
As an employee in the financial services environment, I am equipped with the right digital tools to do my work of today and to redesign my work of tomorrow	11,6%	51,2%	24,4%	11,6%	1,2%	**100%**
I have upskilled and advanced my abilities but am unable to fully utilize it in my current role	3,5%	34,9%	29,1%	32,6%	0,0%	**100%**
The organisation can derive more from the current Technology, through further reskilling	45,9%	54,1%		0,0%	0,0%	**100%**

As shown in Table 4.3 above, regarding the statement "*Our reskilling programmes provide opportunity for improving Digital transformation & innovation*", the majority of respondents (86%) either strongly agreed (27.9%) or agreed (58.1%) with the statement. An analysis of the responses (Table 4.3) revealed that 69.8 % of the respondents agreed or strongly agreed with the statement that reskilling programmes were effective in attracting and retaining talent. Table 4.3 reveals that the majority of respondents (65.1%) either strongly agreed (9.3%) or agreed (65.1%) with the statement that the reskilling programmes reinforced the purpose and importance of the human touch. Analysing the response to the statement "*The reskilling programmes are clearly aligned to the Digital Transformation Strategy*", a total of 73.3% of the respondents either agreed (46.5%) or strongly agreed (26.7%) that they delegate responsibly, with the statement.

An analysis of the responses revealed that the majority of the respondents (76.7%) either agreed (76.7%) or strongly agreed (20.9%) that reskilling programmes had increased employees' level of confidence to adopt digitalisation as a core business practice. In analysing the responses to the statement (Table 4.3) "*As an employee, I am being equipped with correct skills to transit into an organisation that is increasingly automated*", the majority of the respondents (72.1%) either strongly agreed (14%) or agreed (58.1%) with this statement. Table 4.3 reflects that a total of 53.5% of the respondents either strongly agreed (9.3%) or agreed (44.2%) that the reskilling programmes had equipped employees with correct skills that they are applying in their current jobs. In analysing the responses to the statement "*As an employee in the financial services environment, I am equipped with the right digital tools to do my work of today and to redesign my work of tomorrow*", a total of 62.8% of the respondents either strongly agreed (11.6%) or agreed (51.2%) with the statement. As shown in Table 4.3 above, regarding the statement "*I have upskilled and advanced my abilities but am unable to fully utilize it in my current role*", the minority of respondents (38.4%) either strongly agreed (3.5%) or agreed (34.9%) with the statement. As shown in Table 4.3 above, regarding the statement "The organisation can derive more from the current Technology, through further reskilling", all the respondents (100. %) either strongly agreed (45.9%) or agreed (54.1%) with the statement.

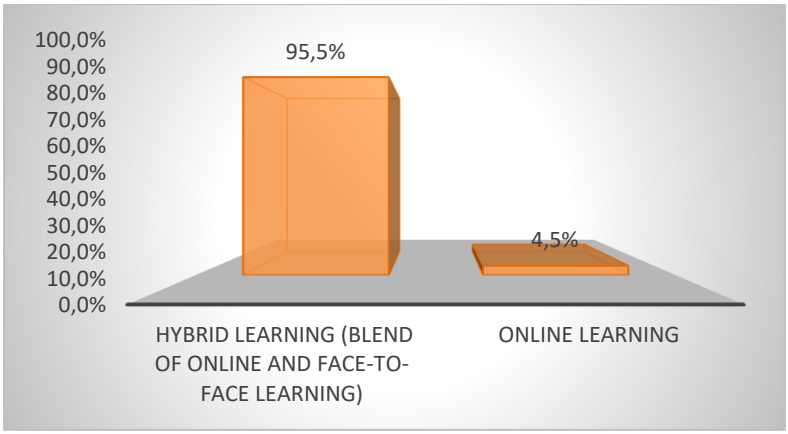

Figure 4.8: The effective learning method to support the digital transformation

Figure 4.8 illustrates that almost all the respondents (95.5%) indicated that the preferred hybrid learning (Blend of Online & Face-to Face learning).

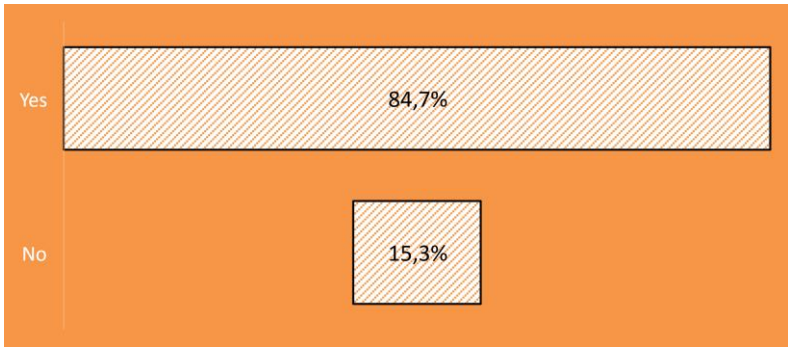

Figure 4.9: Distribution of a member of any kind of professional association

As illustrated in Figure 4.9, the majority of the respondents (84.7%) indicated that they were not members of any kind of professional association, whereas 15.3% of the respondents indicated they were members of any kind of professional association.

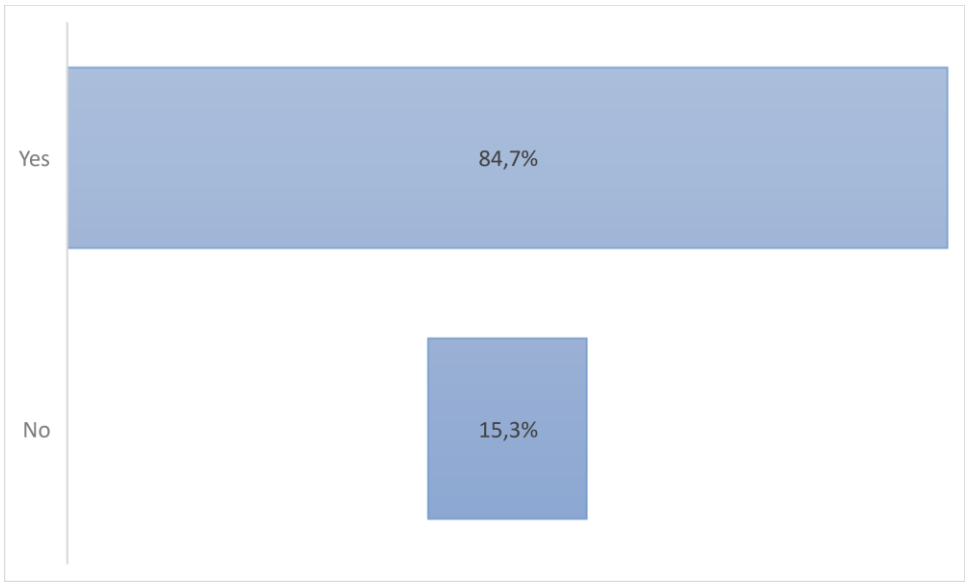

Figure 4.10: Attendance of business seminars/ workshops that focused on digital transformation

Figure 4.10 indicates that the majority of the respondents (84.7%) indicated that they attended the business seminars/ workshops that focused on digital transformation, compared to 15.3% of the respondents who did attend.

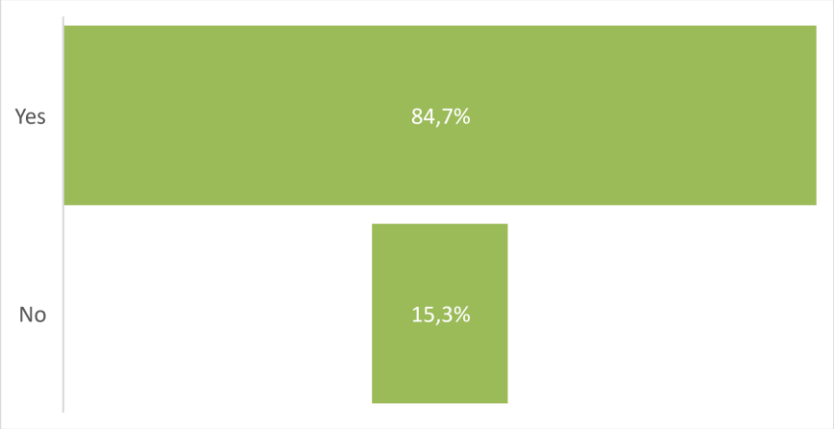

Figure 4.11: Conduct of formal staff development and training workshops

Figure 4.11 indicates that the majority of the respondents (84.7%) indicated that the organisation conducts formal staff development and training workshops on the topics of digitalisation and the Platform Business Model.

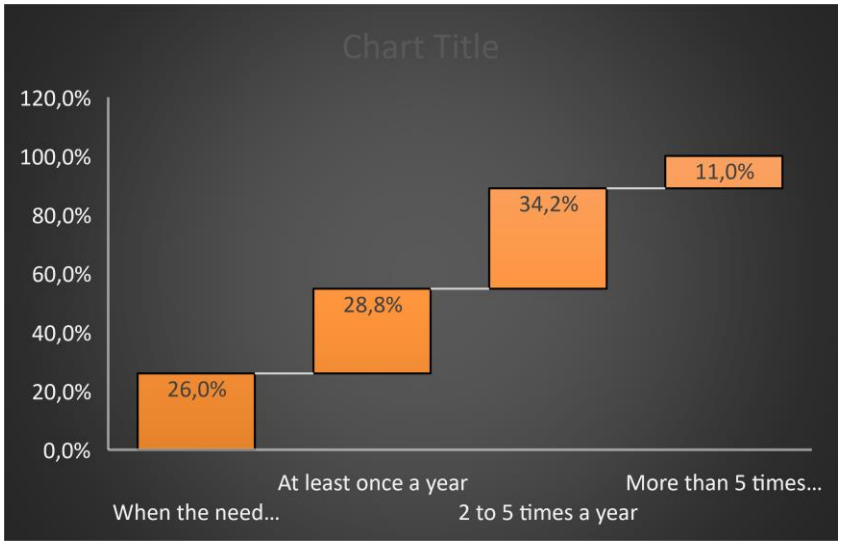

Figure 4.12: Frequency of staff development and training workshops

As depicted in Figure 4.12 above, the largest number of respondents (34.2%) indicated that formal staff development and training workshops are conducted between 2 to 5 times a year; 28.8% of the respondents conduct these workshops at least once in year; 26% of the respondents when the need arises, and 11% of the respondents indicated these workshops were conducted more than 5 times a year.

4.6 Measurement of Digital Transformation

A series of questions were posed to the respondent surveyed to ascertain the criteria they used to measure digital transformation; the success of digital transformation over the past two years, and their perceptions regarding the success.

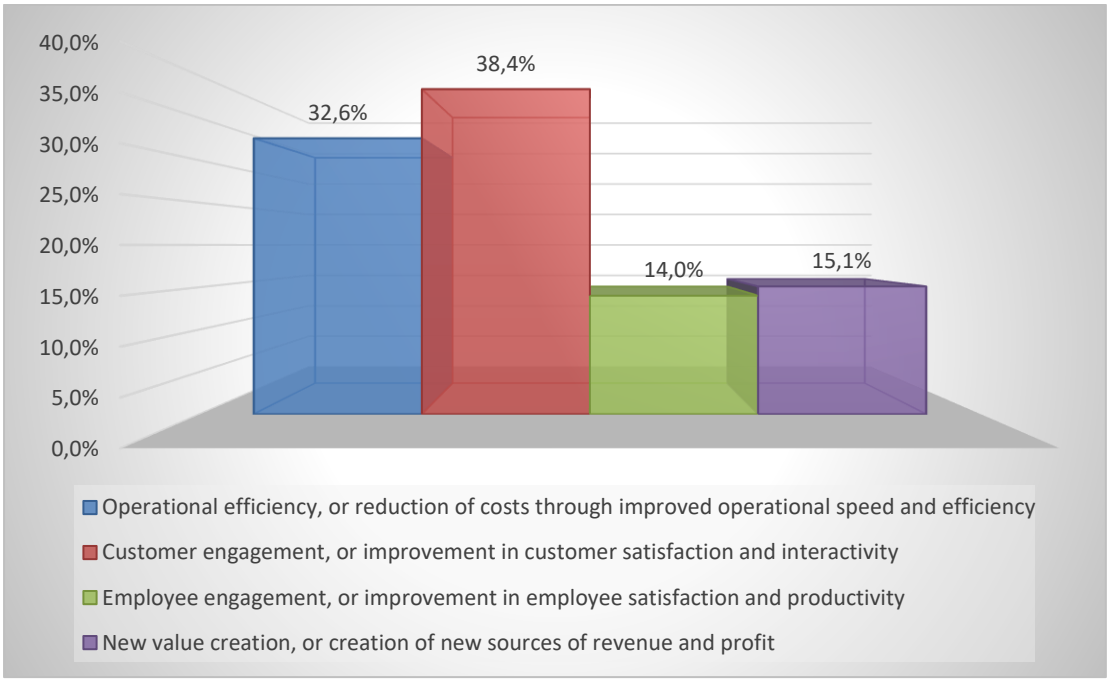

Figure 4.13: Measures of digital transformation

As illustrated in Figure 4.13 above, the largest percentage of respondents (38.4%) stated that they preferred using customer engagement, or improvement in customer satisfaction and interactivity as a measure of digital transformation, and 32.6% of the respondents also indicated that they measured digital transformation through operational efficiency, or reduction of costs through improved operational speed and efficiency. Fifteen percent of the respondents indicated they used new value creation, or creation of new sources of revenue and profit as a measure of digital transformation, and 14% of the respondents used employee engagement, or improvement in employee satisfaction and productivity as a measure of digital transformation.

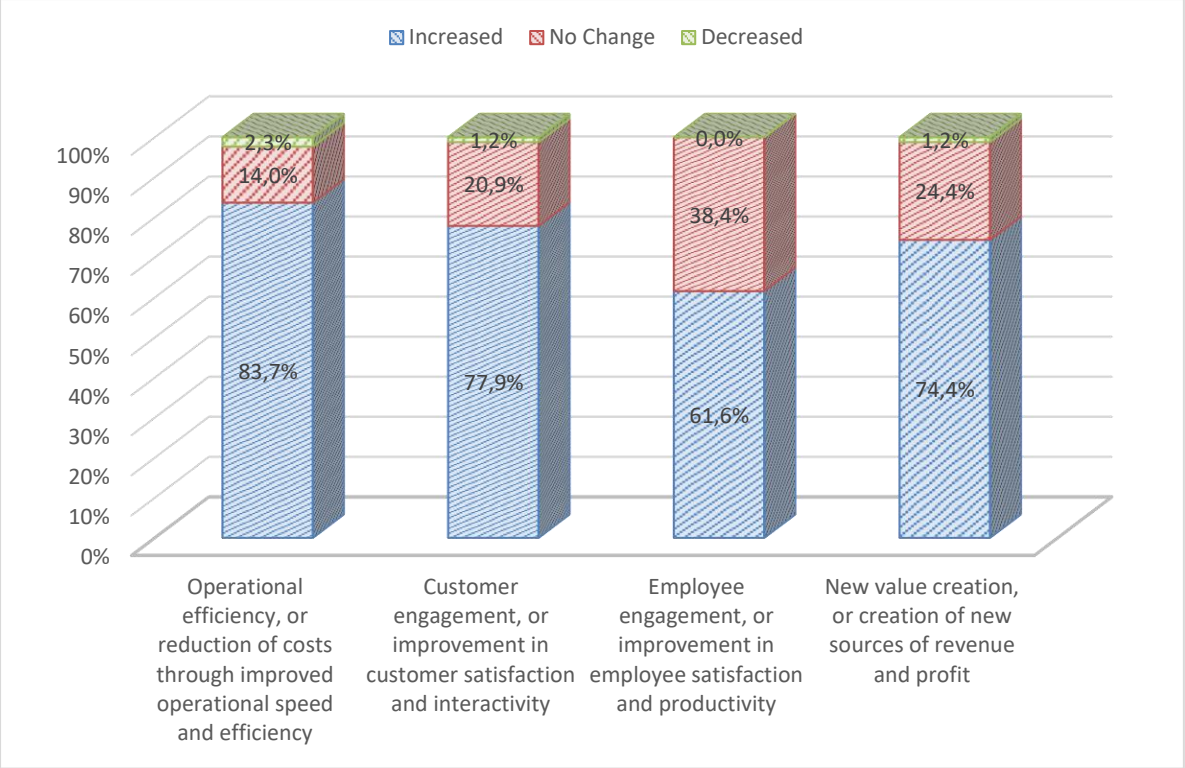

Figure 4.14: Success trend of digital transformation

As indicated in Figure 4.14 above, analysing the success trend of digital transformation in terms of operational efficiency, or reduction of costs through improved operational speed and efficiency, 83.7% of the respondents indicated that they're this metric had increased over the last three years. Figure 4.14 reveals that 77.9% of the respondents indicated that customer engagement, or improvement in customer satisfaction and interactivity had increased over the last three years. In terms of the number of new value creation, or creation of new sources of revenue and profit, a total of 74.4% of the respondents indicated that there was an increase in the last three years. Furthermore, Figure 4.14 above, analysing success trend of digital transformation in terms of Employee engagement, or improvement in employee satisfaction and productivity, 61.6% of the respondents indicated that this indicator had increased over the last three years.

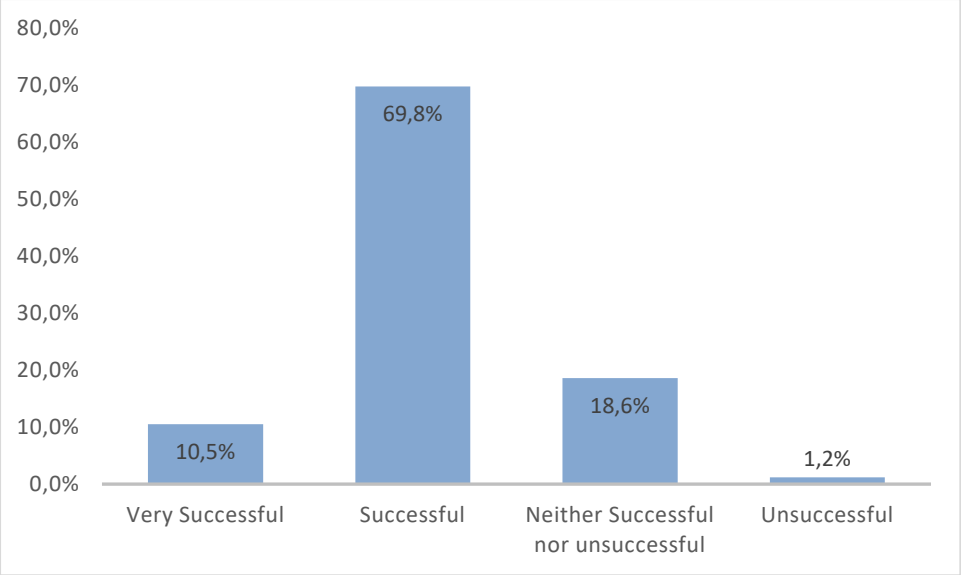

Figure 4.15: The rating of the digital transformation success

A five-point Likert scale, ranging from very successful (1) to very unsuccessful (5), was used to ascertain the success rate of the SMEs. As shown in Figure 4.12 above, 80.2% of the respondents indicated that digital transformation was either very successful (10.5%) or successful (69.8%); 18.2% of the respondents indicated that digital transformation was neither successful nor unsuccessful, while 1.2% of the respondents indicated that digital transformation was unsuccessful.

4.7 The relationship between reskilling programmes and digital transformation

The Chi-test statistic is commonly used for testing relationships between categorical variables. The null hypothesis of the Chi-Square test is that no relationship exists on the categorical variables in the population; they are independent (Wegner, 2018). In other words, a p-value less than 5% indicates that there is an association between reskilling programmes and digital transformation. Conversely, a p-value above 5% implies that there is no statistical evidence to indicate that there is an association between reskilling programmes and digital transformation.

Table 4.4: The relationship between reskilling programmes and digital transformation

Statement	Chi-Square	df	Asymp. Sig.
Our reskilling programmes provide opportunity for improving D&I	60.791[a]	3	0.000
Our reskilling programmes are effective in attracting and retaining talent	33.721[a]	3	0.000
Our reskilling programmes reinforce the purpose and importance of the human touch	45.907[a]	3	0.000
Our reskilling programmes are clearly aligned to the Digital Transformation Strategy	6.721[b]	2	0.035
Our reskilling programmes have increased my levels of confidence to adopt digitalisation as a core business practice	19.628[b]	2	0.000
As an employee, I am being equipped with correct skills to transit into an organisation that is increasingly automated	51.860[a]	3	0.000
Our reskilling programmes have equipped me with correct skills that I am applying in my current job	25.907[a]	3	0.000
As an employee in the financial services environment, I am equipped with the right digital tools to do my work of today and to redesign my work of tomorrow	63.884[c]	4	0.000
I have reskilled and advanced my abilities but am unable to fully utilize it in my current role	21.814[a]	3	0.000
The organisation can derive more from the current Technology, through further reskilling	0.576[d]	1	0.448
How would you rate the digital transformation journey success thus far?	97.163[a]	3	0.000

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 21.5.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 28.7.

c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 17.2.

d. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 42.5.

In providing answers, to the hypothesis Table 4.4 reveals the following that reskilling programmes provided opportunity for improving digital transformation (p value=0.000); the reskilling programmes were effective in attracting and retaining talent (p value=0.000); the reskilling programmes reinforced the purpose and importance of the human touch (p value=0.000); the reskilling programmes were clearly aligned to the digital transformation strategy (p value=0.000); the reskilling programmes had increased the levels of confidence of employees in order for the organisation to adopt digitalisation as a core business practice (p value=0.035); employee, were equipped with correct skills to transit into an organisation that was increasingly automated (p value =0.000); the reskilling programmes had equipped employees with correct skills that were being applying in their current jobs (p value=0.000); the employees in the financial services environment were equipped with the right digital tools to do their work of today and to redesign their work of tomorrow (p value= 0.000); the employees had reskilled and advanced their abilities but they were unable to fully utilize these skills in their current jobs (p value= 0.000); the organisation was able to derive more from the current technology, through further reskilling (p value=0.448), and in terms of success trend of digital transformation, digital transformation was a success (p value=0.000).

Table 4.5 Hypotheses	Decision
HO_1 – Digital Transformation does not have a significant impact on jobs in Financial Services.	Reject HO_1
HA_1 - Digital Transformation in Banks have a major impact on jobs and new emerging job functions in Financial Services.	
HO_2 – There is no direct relationship between a digital transformation programme and requirements for reskilling programmes.	Reject HO_2
HA_2 – A digital transformation programme has a direct relationship with the implementation of reskilling programmes	
HO_3 – Reskilling programmes are ineffective methods in preparing the workforce of the future at a large financial services organisation	Reject HO_3
HA_3 – Reskilling programmes are effective methods of developing the workforce of the future at a large financial services organisation	
HO_4 – Implementing reskilling programmes do not ensure that large financial services organisation have sufficient skills for the workforce of the future.	Accept $H0_4$
HA_4 – Implementing reskilling programmes will ensure that large financial services organisation have sufficient skills for the workforce of the future	

4.8 Conclusion

The chapter provided an overview of socio-demographic data as well as the outcomes of large financial institutions' digital transformation and reskilling programmes. The socio-demographic factors provided information about the survey participants' backgrounds. The Chi-squared test of association method was employed. The findings revealed a statistical link between reskilling and digital transformation. The following chapter (Chapter 5) will discuss the findings and the relationship between the study's objectives and the literature reviewed.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter's purpose is to provide and state the interpretations, as well as to explain the implications of the findings. The chapter's main purpose is to answer the research questions posed in Chapter one, explain how the results support the answers, and show how the answers fit in with the literature research of Chapter two. A brief overview of the research objectives will be presented, followed by a detailed discussion of the research findings, which will be linked back to the literature study to validate the research findings.

5.2 Overview of Research Objectives

The first objective of this study was to determine the effects of digital transformation on jobs in large financial services organisation. The second objective was to determine the relationship between digital transformation reskilling programmes in large financial services organisation. The third objective was to investigate the role of reskilling and programmes in large financial services organisation. The final objective was to formulate an approach to support the deployment of effective reskilling and interventions that support and accelerate digital transformation in a large financial services organisation.

5.3 Discussion on the Socio-Demographic information

The majority of respondents (60.2%) were residing in South Africa. This implies that the large financial services organisation had many employees worked in the host country. The majority of respondents (63.7%) were either executive/senior management (27.3%) or middle management (36.4%). This implies that the digital transformation is mainly affected in the middle and senior management of the organisation, these two levels make critical decision and had responsibility to ensure reskilling programmes enhance digital transformation. The study of Carbo Valverd (2017) revealed that the position level of employees and skills influence transformation of digitalisation in business operations. In analysing the age group of the respondents

only 13.6 percent were entering retiring phase. This reflects that the organisation is investing reskilling programmes in the able-bodied employees. According to Nunan and Di Domenico (2019), less is known about the use of everyday digital services by older adults.

The vast majority of respondents were female. Previous research (Dy, Marlow, & Martin, 2017; Katharina *et al*., 2017) contends that research on women's digital technology use is largely ignored. Digital technology not only gives women access to valuable business information, but it also makes it easier for them to balance work and life. In terms of ethnicity, the findings of the study are consistent with South African demographics where the majority are Africans. This finding is supported by the findings of an ABSA (2019) study, which concluded that the majority of employees in Banking in South Africa are Africans or Indians. In terms of work experience, 33% of the respondents have been employed by the organisation for a period between 5- 10 years and the least respondents (9.1%) of the respondents have been in operation for a period between 16- 20 years. From the analysis above it is evident that the majority respondents were had enough experience as this supports the reskilling programme and digitalisation. This also implies that the Large Financial Organisation had low labour turnover. In terms of education qualification, the majority of respondents (52.3%) possessed diploma/degree. Leitao and Franco (2011) found that the digital transformation is positively affected by the high levels of education of the employees. Employees that are highly educated are able to attain and develop skills to support digital transformation.

5.4 Discussion on the effects of digital transformation on jobs in the financial services sector

Results indicated that majority of the respondents (76.7%) either strongly valued (31.4%) or valued (45.3%) the role of digital transformation on the operational roles. In terms of the impact of digital transformation on the insight driven roles, the majority of respondents (97.7%) either strongly valued (46.5%) or valued (51.2%). This implies that digital transformation plays a key role on insight driven jobs. The results indicated that the largest respondents (41.9%) strongly valued the role of digital transformation on the mono-skilled roles. This implies that respondents were of view that digital

transformation played less impact on mono-skilled roles. Results indicated that a total of 81.4% of the respondents either strongly valued (26.7%) or valued (55.8%) the influence of digital transformation on the multi-skilled roles. It may be concluded that the positive association between digital transformation and multi -skilled tasks. In terms of gauging the value generalist roles, the results indicate that majority of respondents (82.6%) either strongly valued (26.7%) or valued (55.8%) the impact of digital transformation with general tasks. The study also indicates that the majority of respondents (86%) either strongly valued (37.2%) or valued (48.8%) the importance of digital transformation on the specialised roles. In terms of the value of digital transformation on the technology-orientated roles a total of 89.5% of the respondents either indicated they strongly valued (44.2%) or valued (45.3%) the relationship. Lastly, the study found that the majority of respondents (55.8%) either were neutral or not valued the role of digital transformation on creative digital transformation. This implies that, the employees of large financial services organisation did not see the value the impact of digital transformation on the creative jobs.

The impact of digital disruption on labor markets is still being debated, with some predicting significant job losses due to automation in a short period of time (Manyika *et al*., 2017). Others paint a more optimistic picture, predicting that new technologies will create as many new jobs as they will displace. Nonetheless, the effects of digitalisation can already be seen in a variety of job roles and industries (Skog *et al*., 2018), and it is clear that organisations must integrate new technologies and transform business models in order to remain competitive (Sebastian *et al*., 2017). Despite significant academic interest in how digital technology is disrupting job tasks and occupations (Brynjolfsson & McAfee, 2014), little is known about how workers and organisations can best respond to disruptive technological change. A key concern is how to strengthen employee and organisational resilience in the face of disruption from new technologies.

Face-to-face customer interaction; implementation of continuous improvement processes; access to a modernized infrastructure; digital customer interaction; leveraging the power of data and analytics; working remotely; reskilling programmes, and hybrid working conditions were found to be important factors to consider during

digital transformation and job roles. From a technological standpoint, digital innovation can take the form of new digitalized products or service innovations, new digitally driven business models, and digital business strategies based on new paradigms for value creation (Gerster 2017; Hess *et al*., 2019). Furthermore, Meena and Parimalarani (2020) discovered that the major impact of reskilling employment and using digital technology system in India's banking sector.

One effect of digital transformation on jobs in the financial services sector is job displacement, where automation replaces some job functions, making some roles redundant. For example, digital platforms have replaced manual paper-based transaction processing, resulting in reduced demand for manual data entry clerks (PWC, 2020). This displacement of jobs is attributed to the increased use of advanced technologies, such as artificial intelligence and robotic process automation, which can perform routine and repetitive tasks more efficiently and at a lower cost than human labour (Levie *et al*., 2020).

Another effect of digital transformation on jobs in the financial services sector is the demand for new digital skills, such as data analytics and cybersecurity, as well as hybrid skills, such as business acumen and digital literacy. Digital transformation has increased the need for financial institutions to hire skilled professionals who can integrate digital technologies into business processes and strategies (Deloitte, 2020). This shift in skills requirements is a response to the new opportunities and challenges that come with the implementation of digital technologies.

Moreover, digital transformation has enabled the creation of new job roles that require specialized digital skills. For instance, data analysts, cybersecurity experts, and digital marketing specialists are now in demand in the financial services sector, as they help organisations to harness the potential of digital technologies to create value for customers and achieve competitive advantage (Moritz, 2020).

However, the adoption of digital technologies in the financial services sector has also led to the creation of jobs in non-traditional areas. For example, digital transformation has facilitated the growth of online platforms, such as crowdfunding and peer-to-peer lending, which have created new job opportunities in the financial services sector (Deloitte, 2020).

Digital transformation has had a significant impact on the financial services sector, leading to changes in job requirements, skills, and roles. While some job functions have been displaced due to automation, new job roles that require specialized digital skills have also emerged. As the financial services sector continues to undergo digital transformation, it is critical for organisations to develop strategies for managing the effects of these changes on the workforce, including reskilling and upskilling employees, to ensure that they remain competitive in the market.

5.5 Discussion on the effectiveness of workforce reskilling programmes in supporting digital transformation

The results prove that *reskilling* programmes provided opportunity for improving digital transformation and innovation as the majority of respondents (86%) either strongly agreed (27.9%) or agreed (58.1%) with the statement. The study found that the majority of respondents (69.8 %) indicated that reskilling programmes were effective in attracting and retaining talent. In addition to this finding the majority of respondents (65.1%) either strongly agreed (9.3%) or agreed (65.1%) that reskilling programmes reinforced the purpose and importance of the human touch hence superior performance. In terms of the reskilling programmes being clearly aligned to the digital transformation strategy a total of 73.3% of the respondents either agreed (46.5%) or strongly agreed (26.7%). This implies that that the success of digital transformation depends on the alignment of reskilling programmes, this will enhance competitive advantage of the entities.

The study revealed that reskilling programmes had increased employees' level of confidence to adopt digitalisation as a core business practice as the majority of the respondents (76.7%) either agreed (76.7%) or strongly agreed (20.9%). This is similar to the findings of the study conducted by World Economic Forum (2020) that concluded that individuals' abilities to acquire new skills and their receptiveness to training are key factor towards digital transformation. The research concluded that employees should be equipped with correct skills to transform the organisation from manual to automated processes. This finding is encouraging as this echoes the argument of Meena and Parimalarani (2020) that found that banking sector should

concentrate on reskilling employees who were impacted by analytics and automation. A study by Liao and Wu (2020) evaluated the effectiveness of a reskilling programme for employees in the Taiwanese banking industry. The study found that the programme had a positive impact on employees' job performance, suggesting that reskilling programmes can effectively support digital transformation in the financial sector.

In a similar study, Kim and Lee (2020) analysed the effectiveness of a reskilling programme for employees in the South Korean financial industry. The study found that the programme led to an increase in employees' knowledge and skills related to digital transformation, indicating that reskilling programmes can be effective in preparing employees for the changes brought about by digital transformation.

Another study by Yu, Jiang, Xu and Ma (2021) examined the effectiveness of a reskilling programme in the Chinese banking industry. The study found that the programme had a positive impact on employees' knowledge, skills, and job performance, highlighting the potential of reskilling programmes in supporting digital transformation in the financial services sector.

However, not all studies have found reskilling programmes to be equally effective. For example, a study by Sree and Sathi (2019) analysed the effectiveness of a reskilling programme for employees in the Indian banking industry. The study found that the programme did not significantly improve employees' knowledge or skills related to digital transformation, suggesting that more effective reskilling programmes may be needed.

In another study, Lapointe and Rivard (2019) analysed the factors that affect the effectiveness of reskilling programmes in the context of digital transformation. The study found that the design of the programme, the characteristics of the participants, and the organisational context can all influence the effectiveness of reskilling programmes in supporting digital transformation.

The skills necessary to work with artificial intelligence and automation are human skills such as active listening, critical thinking and social perceptiveness, data interpretation. Reskilling and retraining can be a more effective and time-efficient way of increasing human resource capacity and potential. The concept of connecting digital skills and career development has been dubbed digital career literacy (Hooley, 2012). It is the ability to use the online environment to advance one's career (Kettunen *et al*., 2015).

5.6 Discussion on the measurement of digital transformation

On the measurement of digital transformation, the results indicate that the organisation used all the for metrics as indicated by percentage of respondents. The four metrics were as follows:

1. Customer engagement, or improvement in customer satisfaction and interactivity as a measure of digital transformation (38.4%);
2. Operational efficiency, or reduction of costs through improved operational speed and efficiency (32.6%);
3. New value creation, or creation of new sources of revenue and profit as a measure of digital transformation (15.1%), and
4. Employee engagement, or improvement in employee satisfaction and productivity (14%)

These results indicate that both financial and non-financial measures of digital transformation are important to financial institutions. However, these results differ from the findings of a study conducted in East Java, Indonesia, by Sarwoko, Surachman and Hadiwidjojo (2013), which concluded that financial institutions prefer financial measures; this is similar to the findings of Parida, Westerburg and Frishammar (2012) who concluded that banks prefer both financial and non-financial measures because financial measures fail to respond to developments in technological and competitive environment, with the result that internal accounting information is frequently inaccurate and misleading.

5.7 Discussion on success trends of digital transformation

By referring to the results on chapter four there was a positive success trend of digital transformation in all four metrics terms of operational efficiency, or reduction of costs through improved operational speed and efficiency; customer engagement, or improvement in customer satisfaction and interactivity; the number of new value creation, or creation of new sources of revenue and profit and employee engagement, or improvement in employee satisfaction and productivity. The customer experience is a result of the reaction of a customer to certain stimuli of a company before, during and after the purchase of a product or service. Likewise, the customer experience is the process of strategic management of all experiences of clients with a company (Bruhn & Hadwich, 2012). For a client's experience to be optimal, Abolhassan (2017) affirms that "companies must change their strategic approach to the integral and individualized optimization of the customer experience in all digital media and traditional touch points." Design plays an important role in terms of graphic presentation and user experience design; it is important to infer that simplicity, intuition and reactivity are key characteristics that companies must take mainly considered in their digital transformations (Abolhassan, 2017).

5.8 Discussion on the rating of the digital transformation success

The results indicate that digital transformation was either very successful (10.5%) or successful (69.8%). The authors suggest that digital transformation may also have direct or indirect effects on firm outcomes and different performance measures. For instance, through collecting data from United States of America Chief Information Officers, Nwankpa and Roumani (2016) found that digital transformation positively influences firm performance (measured by profitability, customer retention, return on investment (ROI), and sales growth compared to direct competitors). Drawing on previous research, Nwankpa and Roumani (2016) suggested that as digital transformation evolves in an organisation, the organisation is able to achieve increased customization and customer satisfaction while reducing selling costs. Nwankpa and Roumani (2016) noted that digitally embedded business processes increase performance benefits from information capabilities, and digital integration with other parties can reduce costs through communication, transparency, and

monitoring. The authors found that organisations that have undergone a digital transformation mature and are better able to leverage digital technology to improve firm performance. Thus, the authors found that organisations that integrate and build on digital technologies to drive change and new business processes and shift business operations are also more innovative as organisations.

5.9 Discussion on the relationship between reskilling programmes and digital transformation.

The results displayed in Table 4.5 indicate that the digital transformation of large financial services organisation had a major impact on jobs and new emerging job functions. Moreover, digital transformation programmatically had a direct relationship with the implementation of reskilling programmes. In addition to this, reskilling programmes applied like hybrid learning were effective methods of developing the workforce of the future at large financial services organisation. Despite implementing reskilling programmes, it is unfortunate to observe that the large financial services organisation lacked the necessary skills for their future workforce.

The Era of the Industrial Revolution 4.0 offers opportunities for Human Resources (HR) employees to have expertise that is in accordance with the latest technological developments. In order to implement reskilling programmes for HR employees based on current needs, it is necessary for them to have a talent, which is a key or important factor for the successful implementation of Industry 4.0 (Meena and Parimalarani, 2020). This is in line with Meade's (2019) opinion in which states that technological innovation is considered a key strategic tool for organisations to improve competitiveness and performance. Organisations and companies that are able to develop digital innovation are expected to be the best organisations/companies and can compete in the current era.

5.9.1 Application of TIPS Framework to the study

5.9.1.1 Management of Technology

The study investigated the technical aspects of digital transformation and how reskilling programmes can help employees acquire new technology-related skills. The study revealed specific technologies that are being adopted by the organisation like artificial intelligence, blockchain, cloud computing and identified the skills that are required to work with those technologies. The study revealed the role of the reskilling programmes in equipping employees with those skills.

5.9.1.2 Management of Innovation:

On this area of study, it investigated how reskilling programmes can foster innovation within the organisation. The study concentrated on how the reskilling programmes enable employees to develop new ideas, products, or services that are enabled by the new digital technologies. Furthermore, the reskilling programmes of the organisation under study fostered a culture of innovation within the organisation.

5.9.1.3 Management of People

On this aspect the study investigated how reskilling programmes affected the employees' career development. The study revealed the reskilling programmes can provide employees with opportunities to learn new skills and advance their careers within the organisation. They can also investigate how the reskilling programmes can help employees feel more confident and capable in their roles, leading to increased job satisfaction and motivation.

5.9.1.4 Management of Systems

The study evaluated how reskilling programmes impacted the organisation's overall systems and processes. The study revealed reskilling programmes enabled the organisation to streamline its operations and improve its efficiency. Additionally, the study revealed reskilling programmes help the organisation better integrate its various systems and technologies, leading to more effective communication and collaboration.

Overall, the study of these four areas of management can provide a comprehensive understanding of how reskilling programmes can impact the digital transformation of a large financial services organisation. By investigating the technical, innovative, people, and systems-related aspects of reskilling programmes, researchers can provide insights that can help organisations design and implement effective reskilling initiatives.

5.10 Conclusion

The data collected via the questionnaire facilitated the analysis, interpretation, and discussion of investigate the role of reskilling programmes on the digital transformation. The analysis of the data revealed that the majority of respondents were reskilled. Overall, it emerged that reskilling had a significant influence on the digital transformation and success of the organisation.

The final chapter highlights the main findings of the study, draws conclusions, and makes recommendations.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter commences with a summary of the major findings from this study, and is followed by a few concluding remarks, and recommendations for improving reskilling programmes and digital transformation. Thereafter, the limitations of the study are outlined, and suggestions presented for future areas of research.

In the next section, a summary of the major findings from the literature reviewed (in Chapter 2) in terms of reskilling and the digital transformation are presented.

6.2 Review of the major findings of the study (literature)

A reskilling programme's effectiveness cannot be determined until the question of what is being evaluated can be satisfactorily addressed. In a report that evaluated Kirkpatrick's four levels of training criteria thirty years after the model was first presented, the authors highlighted that Kirkpatrick's Model of Training Assessment had become widely used and had been the major evaluation methodology.

It is necessary to adapt learning strategies for different formats and lengths of time, including reskilling and upskilling, to encourage curiosity, creativity, and imagination, as well as to instil confidence in on-going learning and a desire for continuing development. To continue to shape the system and work together to deliver high quality reskilling possibilities for the advancement of employees as well as organisations, this system will need to strategically integrate businesses, employers, and learners themselves. The ability of modern AI to take on increasingly more complicated tasks is shifting the function of knowledge workers, just as the industrial revolution changed the role of human employees from individual craftsmanship to ensuring that machinery runs smoothly. A flexible, learner-centred strategy is required to provide both foundational and experience learning throughout the lifetime learning trajectory and to enable learners to customize their own skills acquisition. Continuous

learning is necessary to adapt to changing labour market demands, as is a significant paradigm shift from the current model of the educational system.

Digital technologies have the potential to enhance how strategic decisions are made, the continuous improvement in the capabilities for analytics, and the automation of business operations for services like customer loaning, fraud activity recognition, compliance and policies, client service, and more, machine learning and artificial intelligence (AI) have grown in popularity and demand in recent years for banking institutions and many other financial service institutions.

Additionally, due to the need for increased productivity, the implementation of strategic policies, and the advancement of technology, approximately 4.5 million jobs including those in the financial sector are anticipated to be created by 2030, while only about 3.3 million of the current workforce is predicted to be obsolete (McKinsey & Company, 2019).

There have been numerous debates and discussions about AI and automation in the South African and global contexts, as well as the potential effects on employment of the technological advancements of the Fourth Industrial Revolution, such as advanced robotics, blockchain, nanotechnology, loT, machine learning, 3D printing, and others. Ultimately, banking institutions must have a strategic approach to re-skilling them in order to give them the skills and competencies that will enable them to remain competitive and put them in a position to increase their work productivity (World Economic Forum, 2018). According to predictions, digitalisation, AI, machine learning, and automation will be able to create about 1.8 million new jobs in South Africa, driven by the demand for productivity gains. Even though AI is generating millions of new jobs, the banking institutions' research warns that the highly skilled and less skilled workforces may become more unequal as intelligent robots replace human labour. Additionally, it has been noted that whenever an industrial revolution occurred, worries about job losses due to technological advancements existed (Peters, 2017).

Numerous jobs are at risk of being replaced by AI and intelligent automation due to the ongoing, quickly expanding improvements brought about by digital transformation (Petropoulos, 2017). All industries have been impacted by the rise of intelligent robots, which has caused them to undergo a radical transformation that will change how work is done in those industries (World Economic Forum, 2018). Typists, administrators, clerks, tellers, and other occupations are just a few of the jobs that have been lost due to technological advancement in recent years.

6.3 Major findings regarding the hypotheses

The hypotheses of the study were as follows:

Table 6.1: Decision on the hypotheses

Hypotheses	P- Value	Decision rule
HO1 – Digital Transformation does not have a significant impact on jobs in large financial services organisation. HA1 - Digital Transformation in Banks does have a major impact on jobs and new emerging job functions in large financial services organisation.	0.0001	Reject Ho
HO2 – There is no direct relationship between digital transformation and requirements for reskilling programmes. HA2 – There is a direct relationship between a digital transformation and requirements for reskilling programmes.	0.035	Reject Ho
HO3 – Reskilling programmes are ineffective in preparing the workforce of the future at a large financial services organisation.	0.0001	Reject Ho

HA3 – Reskilling programmes are effective methods of developing the workforce of the future at a large financial services organisation.		

6.3.1 Digital Transformation in Banks does have a major impact on jobs and new emerging job functions in large financial services organisation

Digital transformation of large financial services organisation had a major impact on jobs and new emerging job functions. Digital transformation involves using technology to improve operations, products, and services, which can change the way banks operate and how customers interact with them. The study pointed out that digital transformation can create new job functions such as data analysts, cybersecurity experts, digital marketers, and user experience designers. As banks become more reliant on technology, the demand for IT professionals such as software developers, data scientists, and network administrators is likely to increase.

6.3.2 There is a direct relationship between a digital transformation programmes and requirements for reskilling programmes

Moreover, digital transformation programmatically had a direct relationship with the implementation of reskilling programmes. In addition to this reskilling programme applied like hybrid learning were effective methods of developing the workforce of the future at large financial services organisation. Despite implementing reskilling programmes, it is unfortunate to observe that large financial services organisation lacked the necessary skills for their future workforce. The findings of study indicate that large financial services organisation embraced digital transformation, they ensured that their employees have the necessary skills and knowledge to work with new technologies and processes. This requires investing in reskilling and upskilling programmes that can help employees acquire new skills or improve their existing ones. Digital transformation often involves the adoption of new technologies, such as artificial intelligence, machine learning, and robotic process automation. These technologies require new skills that may not have been necessary in the past.

6.3.3 Reskilling programmes are effective methods of developing the workforce of the future at a large financial services organisation

Reskilling programmes, and hybrid working conditions were found to be important factors to consider during digital transformation and job roles. From a technological standpoint, digital innovation can take the form of new digitalised products or service innovations, new digitally-driven business models. Face-to-face customer interaction; implementation of continuous improvement processes; access to a modernized infrastructure; digital customer interaction; leveraging the power of data and analytics; working remotely. The study reveals that reskilling programmes provide employees with new skills and knowledge that they can apply in their current roles, making them more productive and efficient. Additionally, it can enable employees to take on new roles within the organisation that they may not have been qualified for before.

In today's rapidly changing business environment, companies must be agile and adaptable. Reskilling programmes can help employees adapt to new technologies, processes, and business models, ensuring the organisation remains competitive in the market. Investing in employees' professional development can boost employee morale and engagement. Reskilling programmes can also increase employee loyalty, leading to higher retention rates and lower turnover. Reskilling programmes can attract new talent to the organisation, as potential employees are more likely to choose an employer who invests in their employees' professional development.

In many cases, reskilling programmes can be more cost-effective than hiring new employees with the desired skills. It can also help avoid costs associated with attrition and turnover. Reskilling programmes can be a highly effective way of developing the workforce of the future at a large financial services organisation. By investing in reskilling programmes, companies can ensure their employees have the skills and knowledge needed to succeed in an ever-changing business environment.

6.4 Return on Investment (ROI)

A high return on investment indicates that the investment's gains compare favourably to its cost. In economic terms, it is one way of relating profits to capital invested. A company's finances will improve as a result of reskilling and digital transformation. There will be marked improvements in employee knowledge base, high quality skills, improvements in skills, high employee motivation and improvements in innovative capabilities if investment is made in this area.

6.4.1 Personal ROI

Participating in a reskilling programme enhanced the researcher's skills and knowledge in areas such as data analysis, digital marketing, and cybersecurity, which are in high demand in the financial services industry. This may increase the researcher's employability and potentially lead to higher salaries and job security. By partaking in this study, the researcher developed new skills and knowledge that will lead to improved job performance, which can lead to recognition, promotions, and other career advancement opportunities.

6.4.2 Professional ROI

This research demonstrates that providing training and education to employees on reskilling and digital transformation can enhance their skills and knowledge, leading to potential improvements in business performance, productivity, and efficiency. This will result in cost savings, increased revenue, and improved customer satisfaction. Digital transformation is a key driver of innovation and can give an organisation a competitive advantage in the market. By conducting this study in reskilling programmes and supporting research on their effectiveness, the researcher will assist the organisation to position itself as a leader in digital transformation, attracting top talent and customers.

6.4.3 Organisational ROI

Organisational return on investment (ROI) refers to the benefits that a company can expect to receive from investing in a particular activity, such as sponsoring this research study to investigate the role of reskilling programmes on digital transformation in a large financial services organisation. Reskilling programmes can lead to improved job performance and productivity, which can result in increased revenue for the organisation. By sponsoring research on the effectiveness of reskilling programmes, an organisation can ensure that it is investing its resources in the most effective ways possible to drive revenue growth.

Digital transformation can improve customer experience and satisfaction through enhanced products and services. By investing in reskilling programmes and sponsoring research on their effectiveness, an organisation can better position itself to deliver digital solutions that meet the needs and preferences of its customers. Reskilling programmes can lead to more efficient and effective use of resources, reducing costs for the organisation. By investing in reskilling programmes and sponsoring research on their effectiveness, an organisation can identify opportunities to optimize its resources and reduce costs.

6.4.4 Societal ROI

Societal return on investment (ROI) refers to the benefits that a society or community can expect to receive from investing in a particular activity, such as sponsoring a research study to investigate the role of reskilling programmes on digital transformation in a large financial services organisation. Reskilling programmes can help individuals to acquire the skills needed to succeed in the digital economy, leading to increased employment opportunities and economic growth. By investing in reskilling programmes and sponsoring research activities, an organisation can contribute to the growth and development of the broader economy. Digital transformation is driving significant changes in the workforce, requiring individuals to develop new skills and adapt to new technologies.

Reskilling programmes can help to reduce inequality by providing individuals with the skills they need to succeed in the digital economy, regardless of their background or previous work experience. By investing in reskilling programmes and sponsoring research on their effectiveness, an organisation can help to promote a more equitable and inclusive society.

6.5 Limitations of the study

The quantitative nature of this study served as a limitation because the findings are limited in-depth understanding of phenomenon through use of interview schedule as research instrument. The sample size also served as a limitation since the data collection from a small sample cannot be generalised as the experiences or perspectives of all employees at the bank under study.

The study examined the role of reskilling programmes on the digital transformation in the financial services organisation only. Therefore, the findings do not necessarily apply to other banks in South Africa.

6.6 Recommendations

The findings in this study indicated that digital transformation plays a key role in impacting jobs at the financial service organisation. Brynjolfsson & McAfee (2014) argued that despite the academic interest of how digital transformation is disrupting jobs and occupations, little is known about how employees and organisations can respond best.

The effect of digital transformation is already visible in various jobs, and industries (Skog *et al*., 2018), this is evidenced in this study. It is clear that organisations must integrate new technologies and provide employees opportunity with appropriate support to upskill in current technologies and transformation business models in order to remain competitive (Sebastian *et al*., 2017).

The study of Carbo Valverd (2017) revealed that the position level of employees and skills influence transformation of digitalisation in business operations. Earlier research

(Dy, Marlow & Martin, 2017; Katharina *et al*., 2017) claims that little research has been done on how women use digital technologies. Women now have quicker access to important business information, thanks to digital technology, which also helps them balance work and personal obligations. The results of an analysis conducted by ABSA (2019) supported this conclusion. Furthermore, Senior, or Middle Management made up the majority of the responders in this study. This suggests that the Middle and Senior Management of the organisation are most affected by the digital transformation. In addition, they are the levels that make important decisions and are in charge of making sure that reskilling programmes support the digital transformation.

Not all research has concluded that reskilling initiatives are equally successful. For instance, Sree & Sathi's (2019) study examined the efficacy of a reskilling programme for workers in the Indian banking sector. According to the report, there may be a need for more effective reskilling programmes since the programme did not significantly increase employees' knowledge or abilities related to digital transformation.

In a different study, Lapointe & Rivard (2019) examined the variables influencing the effectiveness of reskilling programmes in the context of digital transformation. The study discovered that the programme's structure, the participant's traits, and the organisational setting can all have an impact on how well reskilling programmes assist digital transformation.

Based on the findings from the study and the literature that highlights gaps in the role and effectiveness of reskilling programmes, the following recommendations are made with the intention of improving the digital transformation and reskilling programmes in the organisation under study.

1. The organisation making the investment to send employees to training must provide appropriate support to enable trainees to use and apply lessons learned from training in the organisation;
2. The technology taught during training should be available for employees to immediately use and apply upon their return to achieve more benefits from attending training. Sending employees to train too far in advance of when the technology will be made available or when the trainee can apply the skills, can limit the value of training programmes

3. Participants should use and apply the technical and functional knowledge taught during training in the context of their day-to-day tasks during training to develop contextual knowledge. Furthermore, when learning technical skills during training, trainees need to learn how to use the technology successfully as well as recover from errors to gain self-confidence with using the technology;
4. Selecting Individuals for Technology-Oriented Training Readiness: Choosing the right employees to engage in technology-oriented training programmes for the purpose of reskilling;
5. Designing or Choosing Technology-Oriented Training Programmes Appropriately: Selecting or creating technology-oriented training programmes with essential elements that are needed for successful outcomes, and
6. Providing Agency Support for Employees Post-Training: Sending employees for training is a critical step for reskilling, however, the agency must support the employee to use the skills learned post-training to benefit from the investment in the employee.

6.7 Recommendations for Future/Further Research

The study focused on investigating the role of reskilling programmes on the digital transformation in the financial services organisation. Future research can be undertaken in the following areas:

1. a similar study could be conducted among other banks in South Africa, and
2. a similar study could investigate the influence of digital transformation on employees' performance under same study setting.

6.8 Conclusion

From an analysis of the findings of this study, digital transformation of large financial services organisation had a major impact on jobs and new emerging job functions. Moreover, digital transformation programmatically had a direct relationship with the implementation of reskilling programmes. In addition to this reskilling programme applied like hybrid learning were effective methods of developing the workforce of the future at large financial services organisations. The implementation of reskilling

programmes did not guarantee that the large financial service organisation possessed the essential skills required for its forthcoming workforce, which is regrettable.

Due to advances of technology, a lot of repetitive, routine jobs such like data entry are done through computers. Therefore, financial services organisations should concentrate on reskilling employees who will be mostly impacted by analytics and automation, so employees need to upgrade their skill. The skills necessary to work with AI and automation are human skills such as active listening, critical thinking and social perceptiveness, data interpretation. The banking sector will seek the employee with well-equipped digital skills. In order to address the challenges of technological innovations the bank should give training to their existing employees to re-skill them and in addition to that they are also hiring the candidates more with technology backgrounds.

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ANNEXURES

ANNNEXURE A: ETHICAL CLEARANCE CERTIFICATE

The Da Vinci Institute for
Technology Management (Pty) Ltd
PO Box 185, Modderfontein,
1645, South Africa
Tel + 27 11 608 1331
Fax +27 11 608 1380
www.davinci.ac.za

THE DAVINCI INSTITUTE
for technology management

Reference: 01430
Date: 25 November 2022

Ethical Declaration

I, the undersigned, hereby declare that the Masters Research of the student named below has received ethical clearance from The Da Vinci Institute Ethics Committee. The student and supervisor will be expected to continue to uphold the Da Vinci Institute's Research Ethics Policy as indicated during the application.

Proposed Title: "An investigation into the role of reskilling programmes on the digital transformation at large South African financial services organisation."

Student Name: Aaron Theodore

Student Number: 15119

Supervisor: Dr Tinaye Mahohoma

Co-Supervisor: N/A

Period: Ethics approval is granted from 2022/11/25 to 2025/03/23

Chairperson: Research & Ethics Committee

Prof HB Klopper
Executive Dean: Research and Institutional Partnerships

ANNEXURE B: GATEKEEPERS' LETTER

Standard Bank

People & Capital

Culture, Leadership, and Insights

Standard Bank Centre
5 Simmonds Street
Johannesburg 2001
27 November 2022

To: Whom it may concern

PERMISSION TO CONDUCT RESEARCH IN STANDARD BANK

This letter serves to confirm that Theodore Aaron has been given permission to conduct research in Standard Bank, for them to fulfill the requirements of their Masters, Management of Innovation and Technology through Da Vinci Institute.

The research covers a survey to be sent out to no more than 100 employees who have competed future-fit training course.

The following conditions will apply:

- Standard Bank may not be named as the research site; the organisation will be referred to as a "large South African financial services organisation".
- A signed NDA has been completed.
- **Approval must first be given and submitted in writing from the respective Executive Head(s) of the identified employees.**

With kind regards,

Kim Thompson
Head People and Culture : Engagement and Culture Insights
Kim.thompson@standardbank.co.za

ANNEXURE C: INFORMATION AND CONSENT LETTER

Dear Colleague

You are invited to participate in a research project in pursuit of a Master of Management in Technology and Innovation qualification at the DaVinci Institute for Technology Management.

Research topic:

The role of reskilling programmes on the digital transformation at Standard Bank Group

Introduction to the study:

Globalisation and rapid business transformation have resulted in technological advances and fast-paced innovation giving rise to various products, services and job functions that did not exist previously. Due to these rapid shifts, organisations realise the need for reskilling and upskilling programmes in the workforce.

There is a lack of empirical evidence to indicate whether reskilling programmes in financial services, more especially in Banking is effective in supporting digitalisation transformation. In this specific study the focus is on targeted skills and competencies required for Digital Transformation and a future-fit platform based Financial Services Provider business model.

Given the impact of digitalisation to the financial services sector and its impact on Standard Banks transformation strategy, how effective are reskilling and programmes to support a Technology-based Financial Services Model?

Your participation:

Would you be kind enough to agree to complete a questionnaire for the study? The questionnaire will take approximately 20 minutes to complete. Participation is voluntary, and all information collected will be treated as confidential. Upon your request, the findings of the study will be made available to you once they have been finalised. No personal details will be made available to the public or third party.

Please complete the emailed questionnaire.

Thank you for your anticipated response and cooperation.

T.S Aaron

_____

_____

Mr. T. S. Aaron (Researcher)

(work: 011 241 2466) (cell: 082 330 4552)

theodore.aaron@standardbank.co.za

Dr T. Mahohoma (Supervisor)

(work: 031 – 3735395) (cell: 061 3922078)

tinaye@davici.ac.za

ANNEXURE D: RESEARCH INSTRUMENT

Investigating the role of reskilling programmes on digital transformation

An investigation into the role of reskilling programmes on the digital transformation of a large financial services organisation.

PLEASE INDICATE YOUR ANSWERS BY SELECTING AN APPROPIATE RESPONSE

* Required

* This form will record your name, please fill your name.

1. **SECTION A: DEMOGRAPHIC FACTORS**

Where are you located? *

- ◯ South Africa
- ◯ Within African continent
- ◯ Outside African continent

2. **Kindly indicate your current position level** *

- ◯ Executive/Senior Management
- ◯ Middle Management
- ◯ Junior Management
- ◯ General Staff

3. **Please indicate the age group to which you belong in?** *

- ◯ 25 years and below
- ◯ 26 to 35 years
- ◯ 36 to 45 years
- ◯ 46 to 55 years
- ◯ 56 to 65 years
- ◯ 66 years and above

4. **Please indicate your gender** *

- ◯ Male
- ◯ Female
- ◯ Prefer not to say

5. **Please specify your ethnicity** *

- ◯ African
- ◯ White
- ◯ Indian
- ◯ Coloured
- ◯ Other

6. **How long have you employed in the organisation?** *

- ◯ Less than 5 years
- ◯ Between 5 and 10 years
- ◯ Between 11 and 15 years
- ◯ Between 16 and 20 years
- ◯ Over 20 years

7. **Indicate your highest level of formal education** *

- ◯ Up to Grade 12/ Std 10/ Secondary Level
- ◯ Trade School
- ◯ Diploma/ Degree
- ◯ B-Tech/ Honours
- ◯ M-Tech/Masters/MBA
- ◯ D-Tech/ Doctorate
- ◯ Other

SECTION B: The effects of digital transformation on jobs in the financial services sector

8. Indicate the extent to which the organisation currently places value on the following job roles: *

	Strongly Valued	Valued	Neutral	Not Valued	Strongly Not Valued
Operational Roles	◯	◯	◯	◯	◯
Insight-driven Roles	◯	◯	◯	◯	◯
Mono-skilled Roles	◯	◯	◯	◯	◯
Multi-skilled Roles	◯	◯	◯	◯	◯
Generalist Roles	◯	◯	◯	◯	◯
Specialised Roles	◯	◯	◯	◯	◯
Technology-Orientated Roles	◯	◯	◯	◯	◯
Creative Roles	◯	◯	◯	◯	◯

9. Indicate the importance of each of the below factors to job roles in financial service organisations: *

	Very Important	Important	Neither important nor unimportant	Unimportant	Very Unimportant
Face-to-Face Customer interaction is Crucial	◯	◯	◯	◯	◯
Implementation of Continuous Improvement Processes	◯	◯	◯	◯	◯
Access to a Modernize infrastructure	◯	◯	◯	◯	◯
Digital Customer interaction is Crucial	◯	◯	◯	◯	◯
Leveraging Power of Data and Analytics	◯	◯	◯	◯	◯
Working Remotely	◯	◯	◯	◯	◯
Reskilling Programmes	◯	◯	◯	◯	◯
Hybrid Working Conditions	◯	◯	◯	◯	◯

SECTION C: THE EFFECTIVENESS OF WORKFORCE RESKILLING PROGRAMMES IN FINANCIAL SERVICES

10. Please indicate the extent to which you agree or disagree which the following statements: *

	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly Disagree
Our reskilling programmes provide opportunity for improving D&I	◯	◯	◯	◯	◯
Our reskilling programmes are effective in attracting and retaing talent	◯	◯	◯	◯	◯
Our reskilling programmes reinforce the purpose and importance of the human touch	◯	◯	◯	◯	◯
Our reskilling programmes are clearly aligned to the Digital Transformatio n Strategy	◯	◯	◯	◯	◯

As an employee, I am being equipped with correct skills to transit into an organisation that is increasingly automated	○	○	○	○	○
Our reskilling programmes have equipped me with correct skills that I am applying in my current job	○	○	○	○	○
As an employee in the financial services environment, I am equipped with the right digital tools to do my work of today and to redesign my work of tomorrow	○	○	○	○	○
I have upskilled and advanced my abilities but am unable to fully utilize it in my current role	○	○	○	○	○

11. Please indicate the most effective learning method to support the Digital Transformation Journey *

- [ ] Online learning
- [ ] Hybrid Learning (blend of Online and Face-to-face learning)
- [ ] Face-to-face Learning

12. Are you a member of any kind of professional association/ forum/ project etc. that focuses on and supports digitalization? (internal to the organisation or externally)

- ◯ Yes
- ◯ No

13. Have you attended any business seminars/ workshops that focus on Digital Transformation *

- ◯ Yes
- ◯ No

14. Does the organisation conduct any formal staff development and training workshops on the topics of Digitization and the Platform Business Model?

- ◯ Yes
- ◯ No

15. If you answered "Yes" above, how often are formal staff development and training workshops conducted?

- ◯ When the need arises
- ◯ At least once a year
- ◯ 2 to 5 times a year
- ◯ More than 5 times a year

SECTION D : MEASUREMENT OF DIGITAL TRANSFORMATION IN THE FINANCIAL SERVICES

16. Which of the following measures do you use to evaluate the digital transformation? *

- ◯ Operational efficiency, or reduction of costs through improved operational speed and efficiency
- ◯ Customer engagement, or improvement in customer satisfaction and interactivity
- ◯ Employee engagement, or improvement in employee satisfaction and productivity
- ◯ New value creation, or creation of new sources of revenue and profit

17. Over the past 2 - 3 years, what has been the trend in respect of the following? *

	Increased	No Change	Decreased
Operational efficiency, or reduction of costs through improved operational speed and efficiency	◯	◯	◯
Customer engagement, or improvement in customer satisfaction and interactivity	◯	◯	◯
Employee engagement, or improvement in employee satisfaction and productivity	◯	◯	◯
New value creation, or creation of new sources of revenue and profit	◯	◯	◯

18. How would you rate the digital transformation journey success thus far? *

	Very Successful	Successful	Neither Successful, nor unsuccessful	Unsuccessful	Very Unsuccessful
How would you rate the digital transformation journey success thus far?	◯	◯	◯	◯	◯

Thank-you for completing this questionnaire. All responses are strictly confidential.

If you would like to receive a report on the main findings of this study please state your e-mail address or postal address please indicate that below.

19. I would like to receive a summary of the findings of this study

- ◯ Send me the summary
- ◯ Don't send me the summary

20. Do you want to share any comments related to this topic?