



An investigation into the perceived impact of Artificial Intelligence on recruitment and selection practices of HR professionals within the retail sector in the Western Cape.

by

Lauren Nicole Daniels

A mini-thesis submitted in partial fulfilment of the requirements for the degree
of

Master of Commerce

in Industrial Psychology at the University of the Western Cape

UNIVERSITY of the
WESTERN CAPE

Supervisor: Professor Fatima Abrahams

March 2024

TABLE OF CONTENTS

LIST OF ABBREVIATIONS.....	vi
LIST OF TABLES AND FIGURES.....	vii
ABSTRACT.....	viii
DECLARATION	x
ACKNOWLEDGEMENTS.....	xi
CHAPTER 1	1
1.1 INTRODUCTION	1
1.2 BACKGROUND OF THE RESEARCH.....	1
1.3 STATEMENT OF THE PROBLEM.....	2
1.4 RESEARCH QUESTIONS	3
1.5 OBJECTIVES OF THE RESEARCH	3
1.5.1 General Objective	3
1.5.2 Specific Objectives	3
1.6 SIGNIFICANCE OF STUDY	4
1.7 DEFINITION AND CLARIFICATION OF TERMS	4
1.8 DELIMITATIONS OF THE RESEARCH.....	4
1.9 OUTLINE OF THE RESEARCH REPORT.....	5
1.10 CHAPTER SUMMARY.....	6
CHAPTER 2	7
2.1 INTRODUCTION	7
2.2. WHAT IS ARTIFICIAL INTELLIGENCE?	7
2.3 ARTIFICIAL INTELLIGENCE AND HUMAN RESOURCES MANAGEMENT ...	10
2.4. THE INFLUENCE OF AI IN DIFFERENT HR FUNCTIONS	11
2.4.1 Recruitment & Selection.....	11
2.4.2 Training and Development	12
2.4.3 Performance management.....	13

2.5	APPLICATION OF AI IN THE RECRUITMENT AND SELECTION PROCESS..	13
2.5.1	Sourcing	13
2.5.2	Job Application	14
2.5.3	Screening.....	16
2.5.4	Assessments	17
2.5.5	Interviews.....	18
2.6	ADVANTAGES AND DISADVANTAGES OF AI WITHIN RECRUITMENT AND SELECTION.....	20
2.7	BARRIERS TO ADOPTING ARTIFICIAL INTELLIGENCE	22
2.8	PREPARING FOR ARTIFICIAL INTELLIGENCE AND THE FUTURE WORLD OF WORK	23
2.9	THE AI - HR VALUE PROPOSITION	25
2.10	SOUTH AFRICA’S ADOPTION OF AI WITHIN HR.....	26
2.11	THE ROLE OF COVID-19 ON THE USE OF TECHNOLOGY AND IMPLICATIONS FOR HUMAN RESOURCES	28
2.12	CHAPTER SUMMARY	29
CHAPTER 3	30
3.1	INTRODUCTION	30
3.2	RESEARCH PARADIGM / PHILOSOPHY	30
3.3	RESEARCH APPROACH	31
3.4	POPULATION AND SAMPLE	32
3.4.1	Population	32
3.4.2	Sample and Sampling Techniques	33
3.4.3	Sampling strategy.....	34
3.5	DATA COLLECTION	34
3.5.1	Interviews.....	34
3.5.2	Questionnaire	35
3.6	DATA COLLECTION PROCESS	36

3.7	RESEARCH INSTRUMENT	36
3.8	PILOT STUDY	37
3.9	DATA ANALYSIS	37
3.9.1	Data Analysis Process	38
3.10	TRUSTWORTHINESS OF RESEARCH	38
3.11	ETHICAL CONSIDERATION	39
3.12	CHAPTER SUMMARY	41
CHAPTER 4	42
4.1	INTRODUCTION	42
4.2	DEMOGRAPHIC INFORMATION OF PARTICIPANTS	42
4.3	THEMES AND SUB-THEMES	43
4.3.1	HR Professionals' Perceptions of AI	44
4.3.2	HR Professionals' Experience with AI	48
4.3.3	Perceived benefits associated with Artificial Intelligence	51
4.3.4	Perceived risks associated with AI	53
4.3.5	Perceived factors for AI readiness in SA	56
4.3.6	Perceived resistance to AI adoption	59
4.3.7	Measures to prepare and increase AI adoption within recruitment and selection	61
4.3.8	Impact of COVID 19 on the recruitment and selection process	65
4.4	SUMMARY OVERVIEW OF THE FINDINGS	67
4.5	CHAPTER SUMMARY	68
CHAPTER 5	69
5.1	INTRODUCTION	69
5.2	INTERPRETATION AND DISCUSSION OF RESEARCH FINDINGS	69
5.2.1	HR Professionals' perception of AI in recruitment and selection	69
5.2.2	Impact of AI on recruitment and selection practices	70
5.2.3	Impact of COVID 19 on recruitment and selection	72

5.2.4 Preparedness and adoption of the use AI in recruitment and selection	73
5.2.5 Measures to prepare employees and candidates for the use of AI in recruitment and selection	75
5.3 LIMITATIONS OF THIS STUDY	77
5.4 RECOMMENDATIONS.....	78
5.4.1 Recommendations For HR Professionals	78
5.4.2 Recommendations for future research	78
5.5 CONCLUSION.....	79
REFERENCES	81
APPENDIX A.....	92



LIST OF ABBREVIATIONS

AI:	Artificial Intelligence
App:	Application
ATS:	Applicant Tracking System
CV:	Curriculum Vitae
FAQ:	Frequently Asked Questions
HR:	Human Resources
HRM:	Human Resources Management
ICT:	Information and Communications Technology
IS:	Information Systems
IT:	Information Technology
MS	Microsoft
ROI:	Return on Investment
SA:	South Africa
TA:	Talent Acquisition



LIST OF TABLES AND FIGURES

	Page
Figure 2.1 AI-Based Interview Process	19
Table 4.1 Participant Information	43
Table 4.2 Themes and Sub-themes	44



ABSTRACT

The evolution of digital technology has a significant impact on every individual. One of these digital technologies that is currently changing the landscape in various industries is Artificial Intelligence (AI). AI can assist systems to act and think like rational human beings, resulting in more efficient work processes with half the effort. Despite this, there are still many fears, misconceptions and uncertainties about AI, and organisations may not be doing enough to educate staff on the introduction of advanced technologies within the workplace.

The integration of AI into Human Resources Management has rendered traditional methods of recruiting and selecting skilled employees obsolete. The developments in AI also have significant implications for Human Resources (HR) professionals as they have to work alongside advanced technologies such as AI. The overarching objective of the study is to explore the perceived impact of AI on recruitment and selection practices within the retail sector in the Western Cape, as perceived by HR professionals. Primary data was collected using a qualitative approach wherein 9 participants were selected using the purposive sampling method. The research data was collected using semi-structured interviews and the interview guide developed by the researcher served as the research instrument.

The findings revealed that the HR professionals demonstrated a solid understanding of AI, having experienced it either on a personal or professional level. The impact of AI on recruitment and selection was perceived to be mostly beneficial, particularly in the screening stage of the process and the automation of simple tasks that allow for efficiency and time management. The findings further revealed the generational differences of applicants and access to technology and resources as being factors impacting the level of preparedness and adoption for the use of AI within recruitment and selection. Another aspect the study sought to explore is the perceived resistance to AI adoption in human resources within companies in South Africa. The findings highlight the emergence of two factors contributing to AI resistance namely the perceived high costs associated with AI technology and the lack of education and awareness about AI. Furthermore, training and development, change management and education and awareness was found to be some of the perceived measures for increasing AI preparedness and adoption within organisations.

KEYWORDS: Artificial intelligence; Human Resources; HR Professionals; Recruitment and selection; Perceptions; Western Cape; Retail sector; COVID 19



DECLARATION

I, Lauren Nicole Daniels declare that this thesis is my own original work and has not previously been submitted for any degree in any other university, all sources used have been acknowledged as part of the reference list.

Sign: 

Date: 25/03/2024



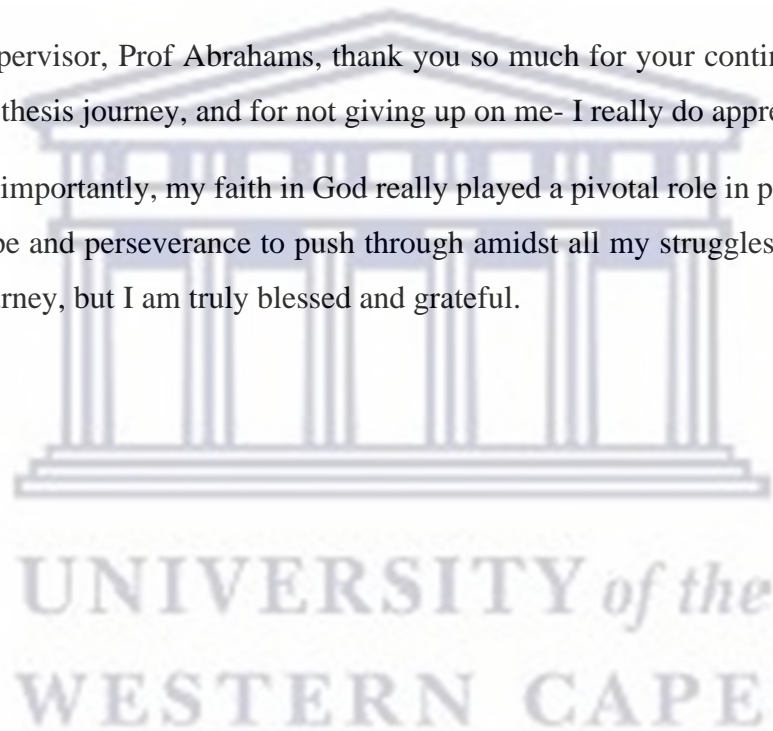
ACKNOWLEDGEMENTS

Firstly, I would like to thank my parents Karen and Rubin, and sister Tanya for the unwavering love and support you have shown me throughout my thesis journey and academic career. Words cannot describe the love and appreciation I have for you. To my nephew and niece Joshua and Ella, you are my daily joy.

I would also like to thank my friends and colleagues for the encouragement, support and guidance they have provided me throughout my studies. Every phone call, conversation, message and words of wisdom really meant so much.

To my thesis supervisor, Prof Abrahams, thank you so much for your continued support and guidance on my thesis journey, and for not giving up on me- I really do appreciate it.

Lastly and most importantly, my faith in God really played a pivotal role in providing me with the strength, hope and perseverance to push through amidst all my struggles faced. It has not been an easy journey, but I am truly blessed and grateful.



CHAPTER 1

OVERVIEW OF RESEARCH

1.1 INTRODUCTION

The continual advancement of digital technology has a significant impact on every individual, regardless of personal preference. Among the emerging technologies that are causing a major disrupting in current industries is Artificial Intelligence (AI). While some individuals may think AI is a future phenomenon, it is already being widely utilised on a daily basis. For instance, the use of online shopping portals, voice command applications such as Alexa or Siri, and the emergence of self-driving cars are all made possible through the use of AI. The effects of AI are being felt in the workplace, particularly in the field of Human Resources. This research focuses on the implications of advanced technology, such as Artificial Intelligence, on Human Resources, with a specific focus on recruitment and selection practices within organisations.

1.2 BACKGROUND OF THE RESEARCH

Artificial Intelligence has emerged as a result of the fourth industrial revolution, which has disrupted several industries and societies worldwide by transforming them through digital technology. This disruption has led to the birth of innovative companies such as Apple, Google, Microsoft, and Facebook. These companies have pioneered the way for smart phones, connecting people through social media, allowing people to have instant access to the world's information at their fingertips, and advanced computer systems making our daily lives much easier. To understand the emergence of AI, we need to delve into the evolution of the fourth industrial revolution (also referred to as Industry 4.0). According to a 2018 Deloitte study, Industry 4.0 is characterised by its ability to transform jobs, economies, and societies through the introduction of novel processes and technologies, such as Artificial Intelligence.

The Deloitte study further reveals that the first industrial revolution, which began in the late 18th century, paved the way for steam power and mechanisation, fundamentally changing the way in which goods were manufactured (Deloitte, 2018). The second industrial revolution, which occurred in the late 19th century, brought about the possibility of mass production through the introduction of electricity and assembly lines (Deloitte, 2018). The third industrial revolution, which began in the 1970s, witnessed the evolution of electronics and information technology (IT) into digital technology (Tarry, 2018). Essentially, these revolutions and advancements in technology have allowed us to program computers and networks, which

powers automation and Artificial Intelligence (Deloitte, 2018). Some of the key elements of the fourth industrial revolution, or Industry 4.0, are data, analytics, the internet of things and Artificial Intelligence (Deloitte, 2018; Tarry, 2018; Summers, 2019).

1.3 STATEMENT OF THE PROBLEM

The field of Human resources (HR) has undergone significant changes over the past few decades since its inception as Personnel Management, where responsibilities mainly involved administration around the hiring and managing of employees. These changes were brought on by the rise in globalisation and advances in technology and society (Tarry, 2018). Currently, apart from the traditional role that HR plays in the recruitment, selection and management of staff, it also takes a more strategic role in driving organisational goals and strategies. According to Tarry (2018), HR's placement in the organisation empowers them to define and foster an organisational culture where change is welcomed, as well as respond and adapt to changing and emerging technologies.

The progression of digital technology has resulted in a shift in the world of work, prompting organisations to adapt their workplaces to accommodate these changes. This change requires the workforce to acquire new skills that are essential for these new technologies. Terms like the Fourth Industrial Revolution and Artificial Intelligence are not new and are already having an impact on labour markets and jobs. De Pasquale (2018) indicates that this is due to the increasing use and development of Robotics and Artificial Intelligence. These advancements in Artificial Intelligence and Robotics would lead to the streamlining and enhancement of various workplace processes to achieve more efficient results. As a result, Human Resources departments would be significantly affected as they are responsible for ensuring that organisations possess the necessary skills to benefit from technological advancements such as Artificial Intelligence. The introduction of Artificial Intelligence into the workplace presents many opportunities for development, but it also raises the possibility of redundancies.

As technology continues to advance at an unprecedented rate, it is highly improbable that Artificial Intelligence will simply fade away. While AI will certainly bring about enhanced efficiencies in the workplace, it will also disrupt various industries and businesses. Despite these potential benefits, there still exist numerous fears and misconceptions surrounding AI, including concerns that machines may soon replace human workers. Research conducted by Career Builder on HR leaders found that automation and Artificial Intelligence will significantly affect HR over the next few years. In fact, 13% of these HR leaders already see

evidence of AI becoming a constant feature in HR, with 55% predicting an even greater impact in the next five years (Bolden-Barrett, 2017). In the South African employment landscape, AI raises important questions about the already staggering unemployment rates and skill shortages. This brings on the question of what impact AI will have on HR and the workplace and how HR departments and organisations can align their practices to adapt to these changes.

1.4 RESEARCH QUESTIONS

The research questions provide a high-level view of this study and are as follows:

- What are the perceptions of Artificial Intelligence on recruitment and selection?
- What is the impact of Artificial Intelligence on recruitment and selection practices?
- What is the level of preparedness for the use of Artificial Intelligence within the recruitment and selection process?
- How can we prepare employees and candidates for Artificial Intelligence in the recruitment and selection?

1.5 OBJECTIVES OF THE RESEARCH

1.5.1 General Objective

The literature review in this research provided insights into the nature of Artificial Intelligence, the functions of HR that may be influenced by AI, and the future world of work. For the purposes of this study, the focus will be on recruitment and selection practices. As a result of the global pandemic, the review will also touch on the implications of COVID-19 on recruitment and selection practices. The overarching objective of this research is to investigate the perceived impact of Artificial Intelligence on recruitment and selection practices within the retail sector in the Western Cape, as perceived by HR professionals.

1.5.2 Specific Objectives

The specific objectives of this research study are:

- To investigate HR professionals' perception of AI in recruitment and selection.
- To explore the impact of AI on recruitment and selection practices.
- To determine the perceived level of preparedness and adoption of the use of AI in recruitment and selection (from a South African perspective).
- To explore what can be done to prepare employees and candidates for the use of AI in recruitment and selection.

1.6 SIGNIFICANCE OF STUDY

From the above paragraphs, it is clear that AI will have certain implications for Human Resources (HR) and the workplace. Whilst there have been several studies on Artificial Intelligence and Human Resources conducted at an international level, however, the topic is still very novel, particularly within South Africa. There are still limited academic journals published on AI with specific reference to recruitment and selection. Although recruitment and selection falls within the Human Resources Management (HRM) function, it includes several facets along the process that AI can impact. A need exists to further unpack the perceptions and impact of Artificial Intelligence, specifically within the recruitment and selection space in South Africa.

1.7 DEFINITION AND CLARIFICATION OF TERMS

Perceptions

Perceptions refer to an individual's understanding of something and how they make sense of a particular topic. An individual's perception is subjective and differs from person to person.

Human Resources

Human Resources or HR refers to a function that is usually found within most organisations and is responsible for the hiring of the organisation's workforce. Human Resources or HR covers the employee lifecycle from recruitment and selection to training and development and, ultimately, when the employee exits the organisation.

Recruitment and Selection

Recruitment and selection refers to the process involved in the hiring and placement of individuals within the organisation.

Artificial Intelligence (AI)

Artificial Intelligence refers to the ability of a computer to perform tasks normally associated with human abilities. The term Artificial Intelligence and AI will be used interchangeably within this research report.

1.8 DELIMITATIONS OF THE RESEARCH

The researcher acknowledges that she is not an expert on the topic of Artificial Intelligence. The field of Artificial Intelligence can be considered to be extremely complex to laymen. Thus,

this research and study is based on the general and intelligible application of AI in recruitment and selection. The researcher intends to provide the reader with the concept in general terms, taking the reader through the background and significance of this study in order to better understand its implications. This researcher intends to understand HR professionals' perceptions of Artificial Intelligence in recruitment and selection practices. The sample of the research will be limited to HR professionals working in the retail sector within the Western Cape.

1.9 OUTLINE OF THE RESEARCH REPORT

The research will consist of five chapters, namely:

Chapter 1: Overview of the research

This chapter introduces the reader to the topic at hand, providing the background of the research and discussing the research problem and the significance of the study. The general and specific objectives of the research were highlighted, in which the research questions were generated. The delimitations of the research and clarification of the terms used within the research are also discussed.

Chapter 2: Review of the Literature

This chapter takes a deeper look at the research topic at hand and uncovers what other academic sources have explored on the topic. The concept of Artificial Intelligence and Human Resources, specifically recruitment and selection practices and the relationship between these areas is examined.

Chapter 3: Research Design and Methodology

This chapter delineates the research design and methodology used to collect and analyse the data for the study. The chapter also includes the type of data collected, population and sample, data collection methods, data analysis process and ethical considerations.

Chapter 4: Data Analysis, Findings and Results

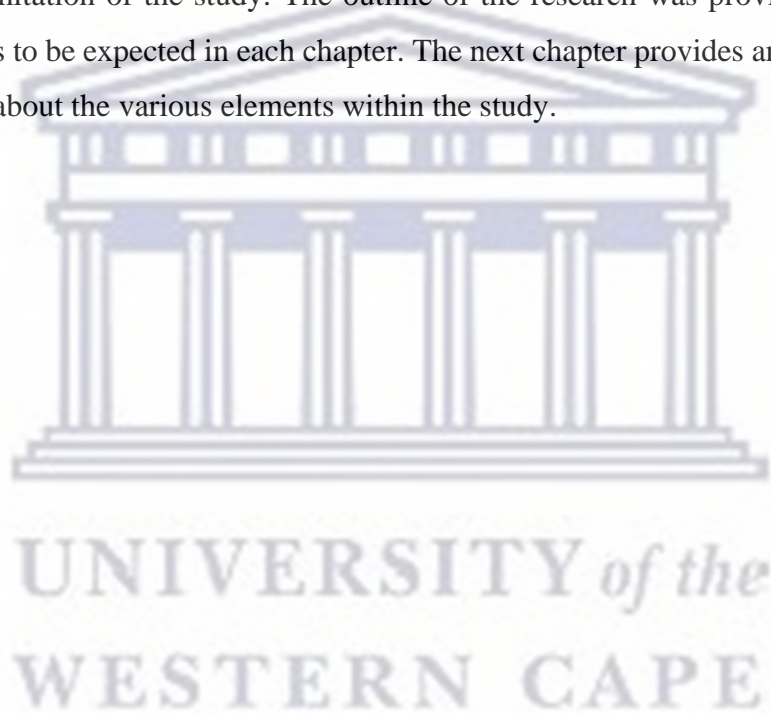
This chapter analyses the data collected and presents the findings and results of the study that was conducted. The findings are demonstrated through the use of graphs and/or tables and then discussed and interpreted.

Chapter 5: Discussion, Recommendations and Conclusion

This chapter encompasses the discussion of the findings, provides possible recommendations and conclusion of the study. It also delivers a consolidated integration of the literature and the research study collected, in addition to making suggestions and recommendations for future studies.

1.10 CHAPTER SUMMARY

This chapter provided an overview of the research, which included the background, statement of the problem, general and specific objectives of the research, significance of the study, as well as the delimitation of the study. The outline of the research was provided to guide the reader on what is to be expected in each chapter. The next chapter provides an in-depth review of the literature about the various elements within the study.



CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

With the intention to better understand HR professionals' perceptions in relation to the impact of Artificial Intelligence on recruitment and selection practices, this chapter aims to provide a comprehensive narrative on the role that AI plays within Human Resources, with a specific focus on recruitment and selection. This review will examine available and relevant literature in relation to the topic mentioned above. This will be done by providing a general understanding of what Artificial Intelligence is, providing insights into the impact of AI on Human Resource Management, as well as examining its application in the recruitment and selection process. The research will also provide the advantages and disadvantages of implementing AI within the recruitment and selection processes, preparing organisations for the use of AI, and looking at South Africa's adoption of Artificial Intelligence. Lastly, with the current global conditions, this research will also discuss the impact of COVID-19 on the use of technology and its implications on human resources.

2.2. WHAT IS ARTIFICIAL INTELLIGENCE?

The increase in technological advancements means that organisations are constantly provided with opportunities to gain a competitive advantage over their competitors. There are many preconceived notions of what Artificial Intelligence is, and many individuals have this fear that computers will soon replace them. The term Artificial Intelligence was originally coined by John McCarthy in 1956 as the "science and engineering of making intelligent machines" (as cited in Geetha & Bhanu, 2018). The authors state that AI is a system enabled by a computer, such as a robotic system, which is created to process information that will produce outputs similar to the way in which employees within organisations use their ability to learn through making decisions and sorting out problems (Geetha & Bhanu, 2018).

Furthermore, Artificial Intelligence has been defined as the art of constructing machines that can perform the functions which command intelligence when performed by humans (Kurzweil, 1990, as cited in Jain, 2017). Essentially, this means that people will be able to work alongside machines in order to perform our jobs more efficiently. In addition, AI can assist systems to act and think like rational human beings to obtain the benefits of faster-paced work with minimal computational errors as well as less fatigue (Jain, 2017). In other words, AI can save

an organisation's time and money that may be lost due to human error. Consequently, this may lead to the modernisation of routine and monotonous tasks. Moreover, Chu (2018) describes the way in which AI works is that it utilises several mathematical algorithms that can learn from vast amounts of structured data that will enable it to solve complex problems which originally could only be solved through human intelligence. A 2017 report by Accenture (as cited in Schoeman et al., 2017) also supports the aforementioned in asserting that AI consists of different technologies which are amalgamated in several ways to sense, understand, act and learn – Big Data together with cloud computing and, importantly, the Internet of things.

The Accenture study has identified three crucial factors that have facilitated the evolution of Artificial Intelligence in recent years: the expansion of big data, significant advancements in computing power, and substantial investments in AI research and development. According to Schoeman et al. (2017), there are several examples of AI-powered technologies, including:

- **Virtual agents** (these include many chatbots substituting call centre agents)
- **Speech analytics** (software that identifies stress and emotions to enhance communication through recognising patterns in speech)
- **Cognitive robotics** (robots which are able to learn from the environment and emotions as well as on their own)
- **Identity analytics** (technology that assists with determining access to key systems and data based on information from authoritative systems)
- **Data virtualisation** (the manipulation and retrieval of data through an 'app')
- **Recommendation systems** (these include content targeting and marketing through social media)

Currently, many people still have the perception of Artificial Intelligence as a futuristic phenomenon where we have robots mimicking human interactions and computers basically taking control of our lives. However, the reality is that AI has already manifested itself in many of our daily activities, from our work to our home lives. For instance, when searching for products or services using Google and Facebook, the search criteria that we use would reveal what our interests are and the places that we frequently visit, and this would then produce recommendations for our future searches. Whether individuals know it or not, these platforms are collecting vast amounts of data about us in order to cater to our specific needs. In addition, intelligent assistants, such as Siri and Alexa, are voice-activated assistants that perform certain tasks based on our instructions (asking for directions, playing a song, scheduling appointments,

etc.). Another way that AI has infiltrated our lives and organisations is through chatbots. When people go onto websites or applications – ‘Apps’, we come across chatbots that are able to answer some of the questions that we may have without the interaction of an actual human at the other end. Businesses would be able to provide instant responses to customer queries or complaints through these chatbots whilst optimising their processes by allowing employees to deal only with escalated cases that these bots are unable to resolve.

May (2016) posited a few reasons as to why Artificial Intelligence assistants have the potential to revolutionise human resources. The author observed that certain HR duties are typically time-consuming and administrative, which hinders teams from engaging in more high-level work that is more conducive to achieving greater goals (May, 2016). This is supported by Rathi (2018) who states that the burden of administrative tasks hinders HR leaders from effectively contributing towards strategic planning initiatives at an organisational level. In addition, May (2016) elaborated that despite the desire of internal recruiters to enhance a candidate’s overall experience, much of their time is spent on data entry, scheduling interviews and meetings, and addressing inquiries. Many of these tasks can be automated by intelligent assistants, freeing up HR managers to focus on more strategic work (May, 2016).

There are many benefits brought about by Artificial Intelligence, and with computer power growing extensively, algorithms are becoming even more intricate, and the world is producing vast amounts of data that fuels AI on a daily basis (McKinsey, 2017). One would question whether organisations and employees are moving with the current developments and staying abreast of new technologies in the market to stay ahead of their competition. For organisations, it will mean making smarter business decisions that will allow them to operate more efficiently and effectively. For professionals and employees within organisations, it means continuously learning and having the skills to ensure that they remain relevant to embrace the changes in a dynamic market environment. The reality is that certain professions may become redundant in the future; however, the potential for developing new skills and tapping into new markets is high. With the increasing demand for digital skills, organisations are now taking advantage of various digital training initiatives that will impart certain skills to reduce the digital skills gap (Jain, 2017). Therefore, human resources play a central role in driving and developing these skills needed in the organisation. In light of this conceptualisation of Artificial Intelligence, this research seeks to investigate the implications of AI on human resources, with a specific focus on its application in recruitment and selection practices.

2.3 ARTIFICIAL INTELLIGENCE AND HUMAN RESOURCES MANAGEMENT

Human resources management (also referred to as 'HRM') makes up an important function of an organisation as it is responsible for the recruitment and management of the organisation's workforce. The role of HRM is to support the organisation to enable it to achieve its objectives through the development and implementation of HR strategies that are aligned with the business strategy (Armstrong & Taylor, 2015, as cited in O'Riordan, 2017). The authors further stated that one of the goals of HRM is to ensure that the business has the skilful, talented and engaged employees that the organisation requires (O'Riordan, 2017). Currently, human resources are directing their efforts towards optimising their work in order to achieve a simpler, more efficient and intuitive working environment through the combination of humans and automation (Christopher, 2019). Subsequently, the influence of AI is growing to a larger extent within HRM. According to Christopher (2019), the power of AI within HRM starts from the beginning of the employee recruitment process all the way to the exit process of the employee, which can include training, benefits, engagement, records, etc. Christopher (2019) and Biswas (2019) concur that one of the reasons to adopt AI within HR is a personalised experience.

Recent global trends have demonstrated that there has been an overall drop in employee engagement globally, with serious repercussions for productivity (Tarry, 2018). Biswas (2019) further explains that the future of human resources will be directed towards the employee experience personalising engagement, and this will serve as a competitive edge for businesses. AI tools will allow HR managers to automate repetitive and mundane tasks, allowing them to focus their efforts on providing a better experience to not only the candidates but also the employees and ultimately enhancing their productivity. Lastly, human resources management or 'HR' is ideally situated within the organisation to influence the organisational culture and drive change interventions to gain buy-in from employees for new technologies such as AI in order to motivate change. Tarry (2018) suggests that HR managers need to be able to create innovative systems and attitudes that will assist with harnessing and improving human potential through the partnership of technology and AI. Although human resources may not necessarily be known for cutting-edge innovations where technology is involved, the need exists for HR professionals and HR departments to start thinking about ways to enhance their current processes. This will enable employees to work more efficiently, as well as play a pivotal role as the cornerstone between potential talent and the organisation. Thus, this research seeks to analyse the role of advanced technologies such as Artificial Intelligence for HR professionals and further examine how HR departments can capitalise on its potential capabilities and

provide a better service to current and prospective employees, as well as the organisation as a whole.

2.4. THE INFLUENCE OF AI IN DIFFERENT HR FUNCTIONS

Human Resources lie at the heart of every organisation as they are responsible for the most important assets - the employees. HR managers can also drive organisational strategies and goals through the effective utilisation of their workforce. However, poor recruitment and selection practices will lead to hiring the wrong employees who are unable to make a positive contribution towards the organisation. This can cost the organisation more money and time in re-hiring, training, and developing staff. AI is transforming several areas within HRM, from talent acquisition, training and development to performance management (and many more) (Bhardwaj, 2019). As a result of these changes, several tasks are being automated to provide a faster and more efficient user experience. HR managers may even be able to provide a better service to the organisation as well as to its employees and candidates. The following paragraphs will take a deeper look into the role of AI in some of the HR functions, namely, recruitment and selection, training and development, and performance management. This research will also provide a better understanding of the impact of Artificial Intelligence on areas beyond the current scope of this research (i.e., recruitment and selection) by exploring other areas within the ambit of HRM.

2.4.1 Recruitment & Selection

Recruitment and selection practices (or talent acquisition) play a key role in the direction that an organisation takes. An organisation's talent strategy guides the quality and calibre of the type of workforce the organisation envisions. For instance, the new trend within HR is that practitioners are evolving to a role where they are seen as HR consultants or business partners. This would indicate that in future, organisations need to either develop the competencies of their current employees or recruit individuals who are more conceptual and strategic thinkers. The strategy ultimately influences the type of skills that exist within the business. Firstly, in order to understand the importance of this function of human resources management, one must first understand its meaning. Recruitment and selection can be loosely described as the sourcing and selection of suitable candidates to fill vacant positions within the business. According to Kapur (2018) recruitment is the process of identifying, screening, shortlisting, and selecting future human resources. The author further states that recruitment and selection is a pivotal function of HRM (Kapur, 2018). On the other hand, Talent Acquisition (TA) is the on-going

strategy to source leaders, specialists and future executives of the organisation (Jobvite, 2016). According to Jobvite (2016), TA also focuses on long-term HR planning as well as sourcing suitable applicants for positions that require a unique set of skills.

The introduction of artificial intelligence into the HRM profession has meant that traditional methods of recruiting and selecting skilled employees are becoming outdated. Organisations (i.e. HR Managers) spend a lot of time and money throughout the process, from the sourcing of candidates to the shortlisting, interviews, assessments and so forth. Wislow (2017) explains that talent acquisition software can be utilised to quickly eliminate 75% of applicants from the recruitment process by scanning, reading and evaluating them through AI technology. This not only saves HR time in looking through every single CV and application but also brings about objectivity in the recruitment process. The use of AI in talent acquisition is growing, and many global organisations are at the fore front of these innovations. For instance, Unilever, a multinational corporation, has been using AI since 2017 to screen all its entry-level employees. Rajesh et al. (2018) confirms this by stating that candidates play neuroscience-based games to evaluate inherent traits and even have recorded interviews, which are then analysed through AI. The authors further state that this experiment by Unilever was found to be very successful and has considerably improved diversity and cost efficiency within the company (Rajesh et al., 2018). Therefore, as mentioned above, poor recruitment and selection practices could ultimately lead to the inability of the organisation to achieve its goals (through incompetent staffing). By understanding the application of Artificial Intelligence within recruitment and selection practices, HR professionals will be able to make better decisions and refocus their efforts on achieving strategic HR goals.

2.4.2 Training and Development

Once employees are inducted into the organisation, managers need to invest in the skills of their employees. The increasingly fast pace at which technology and the world of work are advancing means that HR departments need to ensure that their workforce is keeping up with these changes through training and development programmes. In this regard, AI has the potential to improve the way in which employees learn. Wislow (2017) states that AI can successfully plan, organise and manage training programmes for all employees. This can be done through digital classrooms, online courses, or even learning through the use of your mobile device. According to Lamson (2018), AI can facilitate the creation of tailored learning programmes at a faster rate, and this will provide better insights based on large amounts of collected and analysed data. These insights and data will create a better awareness of the

learner's behaviour as well as predict their needs (Lamson, 2018). Pribanic (2018) supports this by adding that AI adapts and responds to the employees' learning styles. Adapting to the employees' learning styles will increase engagement and allow them to easily grasp the content in the training programme. This research examines how AI can influence areas within the HRM sphere, such as training and development.

2.4.3 Performance management

Performance management plays an important role in HRM as it is responsible for ensuring that organisational goals are being effectively achieved through its employees. Performance management can also identify performance gaps by exposing the areas that the employees are struggling with, as well as identifying ways to improve overall productivity within the organisation. Wislow (2017) asserts that AI tools allow HR managers to set specific objectives and allow units to work in smaller increments that make it easier to evaluate, which produces improved overall results. The author further states that it does not only help with improving productivity but also helps with detecting team members who continuously show a lack of engagement. The performance review process, which is an annual occurrence (or more depending on the organisation), can also be streamlined. For instance, AI can limit biases that may be brought on by managers, which can negatively affect the effectiveness of the evaluation process. Becker et al. (2018) report that AI-driven technology can help reduce certain biases by giving managers the tools needed to identify changes in performance in real time as well as providing real-time feedback. Moreover, AI provides tools that will enable HR managers to immediately identify, assess and correct these operational inefficiencies (Becker et al., 2018). Therefore, improving the overall employee experience with regards to performance management. This research aims to collect evidence in support of the view that HRM functions can be impacted and disrupted by technological advancements such as Artificial Intelligence, and this can enable HR professionals to take advantage of these changes and create a competitive edge in their HR operations.

2.5 APPLICATION OF AI IN THE RECRUITMENT AND SELECTION PROCESS

2.5.1 Sourcing

Once a post becomes vacant, organisations begin the process of finding the most suitable candidate for the position that meets the job requirements. Giving the importance of finding the best candidates for the job, organisations need to be smart and creative in their sourcing and attracting methods. In line with these observations, Kapur (2018) mentions some of the

traditional internal and external sourcing methods, both with their pros and cons. The author states that in the case of internal recruiting (where candidates are sourced from within the organisation), this can reduce recruitment costs and act as a motivating factor for internal employees. This could also improve employee morale and development if internal recruiting methods are used. Kapur (2018) describes external sourcing methods, which include online websites, recruitment agencies, newspapers, etc. As technology has evolved, so have the methods that organisations and HR professionals use for recruitment and selection. The emergence of digital recruiting methods implies that HR managers could use online platforms such as social media for their recruitment efforts (Olmert, 2018). Black & van Esch (2020) assert that online platforms such as LinkedIn and Facebook can provide a digital space where organisations can post their job opportunities more efficiently. It provides organisations with information that will allow them to better target their job opportunities and adverts to prospective candidates (Black & van Esch, 2020). This will also allow them to reach various demographics at a faster pace. The application of Artificial Intelligence will mean that traditional sourcing methods will be able to enhance the recruiter and candidates' overall experience.

The Forbes Coaches Council (2018) proclaims that AI will revolutionise recruiting through better sourcing and outreach. AI can collect enough information about hundreds of thousands of applicants in order to find the best fit, including those who are most likely to accept the job offer, in addition to reaching out to the applicant in a more personalised way (Forbes Coaches Council, 2018). Artificial Intelligence software constantly evolves and learns based on the information that it is able to access. AI tools are able to learn what outreach methods (banner ads, text, emails, etc.) work best for each candidate and then link the right method to present the job opportunity to the candidate (Black & Van Esch, 2020). An example of an AI-powered tool is Textio, which allows recruiters to improve their outreach to job candidates by providing them with solutions to improve their job descriptions and messages to candidates that will increase responses (Frank, 2018). McIlvaine (as cited in Black & Van Esch, 2020) states that companies such as Johnson & Johnson also use Textio to adjust the language in their job description, which led to an increase of 13% in female hires.

2.5.2 Job Application

The recruitment and selection process consists of many elements that may be influenced by advanced technology, such as Artificial Intelligence. The job application is completed in the

initial stages of the selection process (Gusdorf, 2009), and involves asking the candidates various questions about themselves, their working experience and qualifications. Many job applications also include the candidate's Curriculum Vitae (CV), reference lists and various other supporting documentation. Gusdorf (2009) explains that many organisations utilise automated tracking systems that entail online submissions of these applications. Once applications are submitted online, they can then be stored in the organisation's application database. The HR department can then use these databases to access and filter down the applications (based on certain criteria) that were submitted. Gusdorf (2009) further states that these automated systems have the ability to scan applications and CVs for certain keywords, which ultimately saves the HR department time in this process. Kufilinski (2018) supports this argument by adding that screening through resumes and inviting applicants to interview can be considered a very tedious process by numerous HR professionals. Automated systems such as applicant tracking systems (ATS) have developed tremendously as technology evolved. An example of this would be Google Hire, an online platform that uses AI technology to enhance the screening of resumes by integrating AI technology into online applicant tracking systems. Flesher (2016) asserts that over the years, applicant tracking systems has started to incorporate elements such as CV parsing, the monitoring of social media, and vigorous reporting metrics.

In addition, AI solutions also enable organisations to use post-hire information to add extra functionalities to existing applicant tracking systems to make better choices and recommendations for new hires (Kufilinski, 2018). The author further states that apart from sorting through various applications, AI application tracking systems can simplify the matching process by selecting the strongest matches by examining each applicant's education, skills, location and even salary preferences whilst linking these aspects to the job requirements (Kufilinski, 2018). Bogle and Sankaranarayanan (as cited in Van Esch et al., 2019) support this by stating that regardless of the method in which the candidate applies for the job, these job websites have the potential to use AI technology to filter and match the most suited applicant to the job. Once candidates have submitted their job applications for the advertised vacancy, they often do not receive feedback from prospective employers on the reasoning why the candidate did not meet the job specifications and criteria. According to Van Esch et al. (2019), the use of Artificial Intelligence can effectively bridge the communication gap between employers and candidates, thereby enhancing recruiters' engagement with potential hires and adding a human touch to the process, even in the absence of direct human interaction. The present study examines the potential benefits of integrating AI into current applicant tracking

systems used by HR departments, particularly in terms of improving recruitment and selection processes. Additionally, this investigation explores how advanced technological applications, such as data analytics, can enable HR professionals to make more informed decisions and modify their strategies based on such data.

2.5.3 Screening

The process of screening candidates is a crucial step in identifying those who meet the minimum requirements for a job. If this phase is not executed effectively, an organisation may miss out on highly skilled candidates or even hire the wrong person. As previously mentioned, applicant tracking systems can be employed as a screening tool to manage numerous applications and filter out unqualified candidates. Skills, experience, education, and other personal and professional attributes are typically used for screening and filtering, as noted by Kapur (2018). Given the large number of applicants, HR managers cannot interview all of them due to time and cost constraints and must further narrow down the pool of candidates. According to Ideal (2020), selecting the right candidates from a sizable pool of applicants is one of the most difficult stages in the recruitment process. In the near future, recruiters' ability to find top talent will be determined by their ability to intelligently automate their workflow, as Ideal (2020) notes. Rajesh et al. (2018) explains that machine learning, a component of Artificial Intelligence, can improve HR's effectiveness by screening the largest number of applicants in the shortest amount of time. Furthermore, Ideal (2020) supports this notion by stating that AI-powered technology can expedite parts of the recruitment process through automation, resulting in a reduced time-to-hire, which may minimise the risk of losing the best talent to competitors who act more quickly.

Furthermore, a few authors also indicate that chatbots powered through Artificial Intelligence are another strategy to effectively screen candidates (Bailie, 2019; Geetha & Bhanu, 2018; McLaren, 2018a). Chatbots can be used to engage with the candidate during the recruitment and selection process by responding to general enquiries without the need for human interaction. According to Ideal (2020), recruitment chatbots can assist recruiters in completing administrative tasks such as asking the candidate screening questions about their experience, skills and knowledge; collecting general information about the individual; ranking them based on metrics such as engagement, qualifications, recent activity; and even scheduling interviews on behalf of the recruiter. Over time, the machine learning element of the chatbot has the capability to understand what metrics to look for based on the information it collects and then

ranks the candidates accordingly (Ideal, 2020). It should be added that chatbots can be useful in responding to enquiries and collecting information about the candidate in real-time. Thus, screening is essentially an opportunity to collect sufficient information about the candidate and, with the use of AI-powered technology, can automate the process to sift out the best talent and ultimately save recruiters time in the process.

2.5.4 Assessments

There are a number of traditional assessments and tests that organisations can utilise to determine whether a candidate may be successful in the job. According to Gusdorf (2009), tests during the selection process are used to identify the skills that a candidate may possess, which cannot be determined through the interview process. The author further states that these tests may include personality assessments, ability tests as well as motivation and aptitude tests (Gusdorf, 2009). A newer and alternative form of AI-driven assessments that can be used in the selection process is game-based assessments or gamification. Ganesan (2019) asserts that gamification when it is used for recruitment, can consist of exercises about industry challenges, behavioural quizzes that incorporate fun elements, and company-related quizzes (amongst others). For example, organisations can use gamification to accurately test skills and competencies in order to automate the initial screening process as well as add game elements to the candidate's experience (Ganesan, 2019). An example of a game-based AI-powered tool is Pymetrics, which uses games to determine if the candidate is suitable for the job. Companies such as Unilever, LinkedIn, Accenture and Tesla utilise the Pymetrics tool in their employee selection process (Ryan, 2018).

The co-founder of Pymetrics, Frida Polli, stated that companies have reported an improvement in job performance amongst those newly hired candidates, in addition to an increase of between 30 to 60 per cent in one-year retention rates of those newly hired candidates (Ryan, 2018). It should also be noted that although game-based assessments may be quicker and add a unique element to the candidate experience, especially with the younger employees who may enjoy interacting with newer technologies, the reliability and validity of the assessment tool should be taken into consideration. Bailie (2019) states that AI-driven and game-based assessments may not be well-tested when compared to traditional methods and more established tools. Thus, organisations should always consider the pros and cons of implementing new assessments within their selection processes. This research explores how the application and influence of Artificial Intelligence within assessments in the selection process can improve the decision-

making criteria of HR professionals and line managers. The research also examines the veracity of the assumption that when implementing new technologies, such as AI-based assessments, HR professionals need to create proper awareness and understanding of new technologies to ensure their effectiveness.

2.5.5 Interviews

The application of AI-powered technology in the interview process could potentially be a game changer for organisations and HR professionals. Traditionally, interviews were done in person with the selection panel or even digitally through video conferencing facilities such as Skype or Zoom. Son et al. (2019) state that interviews that are used as a recruitment tool are considered to be high in cost. The authors further state that the help of AI in this process can be beneficial to both the organisation that makes these significant investments as well as the candidates who are not necessarily given opportunities due to restrictions in the interview process (Son et al., 2019).

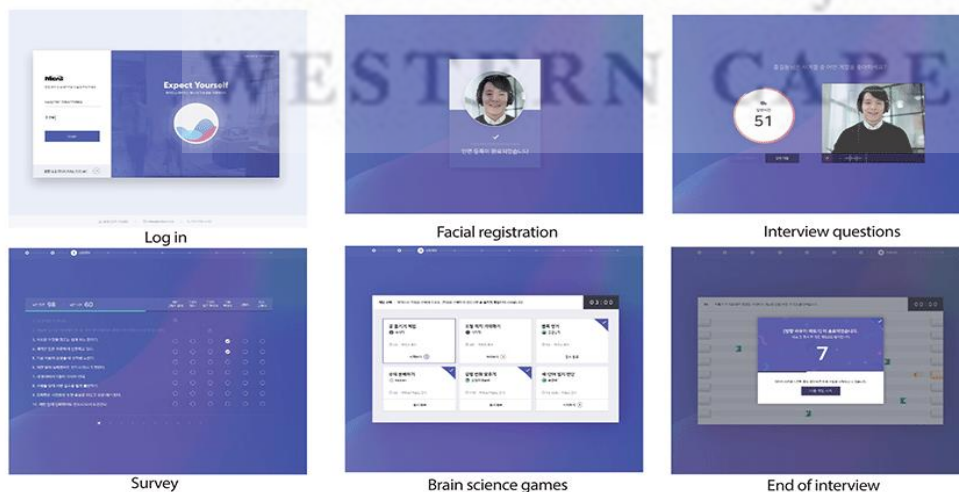
The way in which the AI interview works is that candidates are asked a list of predetermined job-related questions, which are then video recorded by the system and then submitted. One of the benefits of the AI interview is that it can take place remotely without the need for an interviewer's physical presence. HireVue, a recruitment technology firm, has gained prominence for its use of AI-powered video interviews to evaluate the candidate's facial expressions, tone, speech, and body language, as noted by various authors (McLaren, 2018b; Feloni, 2017; Harwell, 2019). The technology uses algorithms to analyse the candidates' features and compares this to the job profile. Companies such as Hilton and Unilever are already using HireVue during the interview process. According to McLaren (2018b), Hilton employs HireVue's video interviewing feature to provide not only the convenience of accessing multiple video submissions at a faster rate but also incorporates AI features that assess the candidate's non-verbal cues and communication skills to determine their suitability for the job requirements. This research, therefore, examines how AI can be used in the interview process.

The way in which Unilever integrates AI technology specifically within their interview process is that once the candidates progress to the interview round, they then take a HireVue interview (this can be done with a smartphone or computer camera) in which they answer each question speaking to the camera (Feloni, 2017). The author further states that HireVue's AI technology then analyses each answer by logging elements such as body language, keywords and tone, at

which hiring managers are able to view a comprehensive list of candidates the software deemed performed best (Feloni, 2017). Son et al. (2019) confirms this by stating that once the candidate completes the AI interview, a report summarising the candidate’s results is then made available to the HR manager. AI interviews can create a more efficient process for HR managers due to the fact that once these AI interviews are analysed, only the best candidates get to move on to face-to-face interviews. However, the premise that AI technology can determine whether a potential candidate gets a call back based on their video submission does question AI’s potential for discrimination based on facial features and language barriers. Thus, organisations and HR departments should always consider the pros and cons of implementing new technology. The below figure illustrates a computer screen of a typical AI interview process (refer to Figure 2.1). The figure below provides a typical AI-based interview process where the candidate is interviewed without the presence of an actual HR person. The use of AI technology in the selection process allows for certain steps to be streamlined in order to create efficiencies in the process. However, it is also important to note that although the AI interview can simulate an interview experience, this does not negate the need for HR’s intervention to determine the best candidate for the job and conduct the final interview to capture elements of the individual that a machine is unable to encapsulate.

Figure 2.1

AI-Based Interview Process



Note. Adapted from Son, M., Lee, H., & Chang, H. (2019). Artificial Intelligence-Based Business Communication: Application for Recruitment and Selection. *Business Communication Research and Practice*, 2(2), 84–92. <http://doi.org/10.22682/bcrp.2019.2.2.84>

2.6 ADVANTAGES AND DISADVANTAGES OF AI WITHIN RECRUITMENT AND SELECTION

There are several benefits to organisations investing in Artificial Intelligence. The main benefit of utilising AI is during the initial stages of recruitment, where most of the time is spent going through the applicants' qualifications (Buchanan, 2018). Applicant tracking systems are able to effectively vet all incoming resumes according to specific keywords, education, as well as other job-specific information (Buchanan, 2018). This ultimately means that HR personnel do not have to spend time reading every single resume. However, the author further states that if the ATS does not scan correctly due to technical reasons, there is a possibility that suitable candidates could get overlooked. Furthermore, with AI-powered systems, organisations are able to cut the monotonous and time-consuming tasks involved in the entire recruitment process and spend more time on a smaller group of eligible candidates (Wislow, 2017). This could improve the overall quality of candidates to be shortlisted and hired. In addition, HR managers may strive for objectivity and fairness throughout their processes but ultimately cannot ensure it 100% of the time despite their efforts. Pennington (2023) explains the term unconscious biases as the ability to influence our views about competence that can impact our recruitment and selection, promotion and talent management decision making within the workplace. The use of AI reduces biases as it screens candidates on their CVs and assessment results. Jain (2017) explains that AI is best able to perform routine monotonous jobs and has the added benefits of cost-effectiveness and reduction in chances of error.

Additionally, another benefit of AI recruitment technology is that it may also assist recruiters with the interview process. Buchanan (2018) states that this technology allows the shortlisted applicants to record a video interview whilst answering work-related interview questions. The interview videos are then analysed through AI technology, where feedback is then provided to the job candidates (Buchanan, 2018). This can reduce anxiety and nervousness associated with the interview process, which can be done virtually from any location. Another important factor of AI's capability in recruitment is that it can improve candidate engagement by keeping communication lines open between the candidate and the organisation (even if the candidate is unsuccessful in the process). Prokopeak (2018) confirms that the communication features in AI provide recruiters with the ability to contact candidates more easily and assist teams in automatically logging calls to track candidates. Overall, by streamlining certain processes, companies (and HR personnel) are able to place more focus on developing innovative strategies and improving the overall candidate experience. Thus, this research assesses the extent to

which the use of Artificial Intelligence technology within recruitment and selection practices could have potential benefits that will assist HR departments through efficiencies and streamlined processes.

The above section notes only some of the benefits of utilising AI in recruitment and selection. There are several drawbacks to the use of Artificial Intelligence within HR processes. One of these drawbacks is that many individuals do not exactly know what Artificial Intelligence is and what it exactly does. This can create confusion and uncertainty amongst employees regarding their future employment. As mentioned above, certain tasks can be better performed by AI, which may ultimately put certain occupations and professions at risk of becoming redundant. Several authors mention Artificial Intelligence and the possibility of job loss in the near future (Drum, 2017; McGrady, 2017; Morikawa, 2017). Another key disadvantage is that Artificial Intelligence is powered through advanced technological systems, and no technology is 100% without fault (Buchanan, 2018). The use of AI in the recruitment and selection process brings about major ethical issues that could potentially unfairly discriminate against candidates who do not match the criteria of the system. In line with this argument, Son et al. (2019) assert that Amazon's AI recruitment programme has received negative publicity due to its adverse bias against women, where they would assess and compare the applicants' resume to those who have a history of high performance and then filtering down undesirable applicants based on this. Vincent (2018) states that AI systems use machine learning to make decisions by looking at historical information, which often perpetuates existing biases (which, in this case, was the male-dominated environment in the tech world). On the contrary, AI's ability to eliminate unconscious bias within the recruitment and section process is considered one of its advantages (Polli, 2019; Folick, 2019).

Another potential loophole in using AI technology is the application of AI interviews, which has the potential to penalise non-native speakers, visibly nervous candidates or anyone who does not match the systems model for look and speech (Harwell, 2019). An essential thing to note about utilising AI is that although it may act as an efficient, intelligent assistant within the HR process, it still lacks the human factor. The automated screening process may not be able to identify the softer skills where there is a lack of human judgement capabilities and even cultural fit aspects (Rajesh et al., 2018). Therefore, humans can never be considered fully redundant, as the onus lies on managers to have the final say on who is hired. Alaruri (2023) explains that AI tools can be used to streamline HR processes in order to focus on higher-level tasks. Thus, in anticipation of the increase in the use of AI within recruitment and selection

processes, organisations would need to start equipping their workforce with the capabilities to prepare for this new AI era. In light of this, this research explains how HR professionals planning to utilise AI within their recruitment and selection practices need to understand the implications of these technologies in order to make an informed decision that would best fit the needs of the organisation.

2.7 BARRIERS TO ADOPTING ARTIFICIAL INTELLIGENCE

Creating the right environment where AI is supported and fostered is required to promote AI adoption. Whilst the adoption of AI is increasing (Goasduff, 2018; McKinsey, 2017), there are still many factors that act as a deterrence and barrier to the smooth integration and adoption of AI technologies within organisational processes. Firstly, Tinholt et al. (2018) state that a country's government plays an essential role in fostering an environment that encourages innovation, as well as managing the potential risks and challenges for creating an AI-enhanced society. A country's government has the responsibility to introduce policies and strategies that will protect and guide its citizens when introducing novel technologies that have potential implications for society and their livelihood. McKinsey (2017) supports this by adding that governments should take the lead in addressing cross-cutting AI issues. Another barrier that can hinder organisations from implementing AI across business functions is the lack of appropriate skills and talent (Rajesh et al., 2018; Tinholt et al., 2018). The lack of appropriate skills and expertise internally means that organisations would have to spend more money on hiring individuals who have AI capabilities. Thus, this research investigates the contribution of AI disruptions on not only recruitment and selection practices but also the broader organisation in terms of human capital expenditure.

Ernst & Young (2018) asserts that it can be difficult and expensive to find well-educated and skilled individuals. This then adds another barrier to AI adoption, which is the financial implications. The financial barriers can be considered a deterrent when it comes to the lack of comprehensive implementation and integration of AI tools that could assist HR with administrative tasks (Ernst & Young, 2018; Rathi, 2018). When business leaders are unable to see the value of using AI technology for HR functions, it tends to be harder to justify the cost (Rathi, 2018). Furthermore, one of the most important factors that has direct implications for organisations and can act as a barrier to AI adoption if not managed effectively is fear. The fears and uncertainty from individuals, whether the fear of job loss due to AI or the fear of the unknown, can lead to resistance to implementation (Goasduff, 2019; Marr, 2019). Resistance to change is due to the fact that humans are habitual beings, and once there are things that

disrupt our processes, it often takes time to adapt to the new way of doing. Marr (2019) adds that the barrier to AI adoption can be due to the reluctance of the human employee to hand over control to a machine or having to administer the technological tools that make AI possible. Therefore, proper change management and awareness are needed to enhance AI adoption. This research explains the need for HR managers to understand the potential implications of Artificial Intelligence on recruitment and selection practices so that they can determine the best measures to put into place to prepare candidates and employees for the use of AI.

2.8 PREPARING FOR ARTIFICIAL INTELLIGENCE AND THE FUTURE WORLD OF WORK

As organisations are being ushered into the Fourth Industrial Revolution, the traditional way in which business is being conducted will need to be adapted. Business leaders should start to reevaluate their existing business models, looking at the current workforce and the skills required to operate in a society transformed by technological innovations. With the onset of the Artificial Intelligence era, the future world of work is changing, and therefore, organisations need to be proactive in their approaches. Reilly (2018) asserts that recruitment is considered to be an area most transformed by technology. The author adds that from the changes in the sourcing of candidates to the online applicant systems, as well as the process in the selection of candidates for interviews, it has become a much more efficient and faster process, transforming the employer-applicant relationship (Reilly, 2018). The use of technology in HR is nothing new; however, AI provides better insights and a much better way of doing things in comparison to current technology.

When preparing an organisation for the introduction of new technologies, such as AI, within business processes, it may be advisable to start with a business case. Firstly, HR professionals and business leaders need to be clear on the need to embrace AI. Guenole & Feinzig (2018) state that organisations need to understand the business problem they intend on solving with AI, which can be resolved with better insights, data and information. In addition, there should also be buy-in from business leaders and HR professionals for the need for AI within the organisation. According to the Global Business Outlook (2018), if business leaders and senior managers are not proactive, this could lead to misinterpretation and mistrust from employees regarding the intentions behind the introduction of AI. White-Klososky (2020) expresses that the integration of AI within processes will not just benefit HR but also contribute to uniting the whole team towards a common goal. The author further points out that including leaders across the business in the adoption of AI in HR can also lead to better outcomes (White-Klososky,

2020). Thus, change management interventions are necessary to create awareness about AI and facilitate the staff to encourage AI adoption and reduce resistance to the change. In light of these views, this research investigates the potential implications of Artificial Intelligence within the recruitment and selection practices of HR professionals and what they can do to prepare for the use of AI. As HR professionals play an important role in determining the needs of employees and candidates, it is important to ensure that these gaps are reduced to prevent any negative implications.

Another essential factor when preparing the organisation and HR for AI is determining the skills that exist internally as well as the skills needed to build AI capabilities. Tinholt et al. (2018) assert that AI skills are a requirement for the implementation of the AI infrastructure. The authors further state that in order to transform the organisation in such a way that it can take advantage of new opportunities presented by AI, there has to be a shift in the organisation's capabilities. HR personnel will have to consider refocusing their recruitment strategies to hiring individuals with AI and machine learning qualifications/experience or building the AI capacity amongst existing employees through skills development. Essentially, organisations will need to train their employees to be able to work with the new AI systems and software. According to Phillips et al. (2018), organisations need to accelerate the reskilling of staff, mobilise the workforce to areas that will create value, as well as strengthening their talent pipeline from within. The authors further mention that by encouraging the fast reskilling of its workforce, organisations will be in a better position to succeed in the latest revolution (i.e., the Fourth Industrial Revolution).

Similarly, Rajesh et al. (2018) asserts that preparing the organisation for this new era of AI in Recruitment starts with the upskilling of the talent acquisition function, identifying the skills for the next generation, and outlining the strategies that will attract the right talent who are capable of achieving the business deliverables. With that said, whether an organisation is AI-ready may be a determinant of whether digital technology already forms part of their current work processes. Tinholt et al. (2018) argue that by looking at the existing IT reliance, one can determine the possibility that further digitisation will be embraced. Ultimately, unless the business has vast experience in AI, it may be better to leverage the solutions of companies that have already developed AI (Guenole & Feinzig, 2018). Essentially, technology will continue to improve and disrupt the way in which work is done, and it is up to organisations and their business leaders to be able to adapt and create an environment of empowerment, continuous learning and upskilling. This research improves an understanding of how organisations and HR

managers must stay ahead of AI technological changes so that they can proactively prepare, adapt and assimilate new technologies with the current and future needs of their organisations.

2.9 THE AI - HR VALUE PROPOSITION

Incorporating Artificial Intelligence technology within HR practices provides significant gains to the organisation along with some uncertainties. Being one of the most complex, manual and data-dependent business processes within the organisation, HR professionals are encouraged to consider rethinking its license to operate and add value (PwC, 2017). The report further reveals that the decision-making of the human professional will always be determined in people management. However, the use of AI will provide them with more time, capacity, and budget, as well as more information to make sound HRM decisions (PwC, 2017). Furthermore, White-Klososky (2020) states that AI has the potential to greatly advance an organisation's bottom line, and HR leaders are incredibly positioned in such a way that will reap the benefits of this platform. Guenole & Feinzig (2018) also add that AI solutions allow HR organisations to deliver fresh insights and services at a scale that will not inflate headcount or cost. Thus adding to the potential value of AI within HR and, more specifically, recruitment and selection practices.

Several authors support the use of AI in the recruitment and selection processes as it can result in time and cost savings to HR departments (PwC, 2017; Guenole & Feinzig, 2018; Biwas, 2019; Wright & Atkinson, 2019), which creates an added value proposition for AI in HR. Ultimately, AI can reduce the administrative burden placed on HR departments and professionals and allow them to focus on more strategic planning and decision-making at the organisational level (Rathi, 2018). Several multinational companies such as IBM, L'Oreal and Unilever (to name a few) can be used as case studies due to their success with incorporating AI within their recruitment processes. For example, a company such as IBM receives about seven thousand resumes per day and finding the best candidate in a reasonable amount of time was found to be a challenge. The company then developed an AI solution called Watson Candidate Assistant. Since its implementation, it has radically cut down the time to hire and massively improved the matching of applicants to jobs (Guenole & Feinzig, 2018). By leveraging AI, employers and candidates are able to have real-time interaction through the use of AI-powered chatbots, which results in a more personalised application process for the candidate (Guenole & Feinzig, 2018). Subsequently, this can improve candidate engagement and create a much better image of the company even if the candidate is unsuccessful in the process, thereby encouraging others to want to work for the company.

Furthermore, a few years back, one of the biggest beauty companies in the world, L’Oreal, had a vision to create a more efficient recruitment process and better candidate experience. The company then utilised AI software from Seedlink Technology that can identify both written and verbal language patterns that can make predictions on culture fit and behavioural traits. According to PwC (2017), through the use of this AI software, L’Oreal was able to improve its efficiency and relevance rating remarkably and has also increased its job offer ratio of the interviewed candidates to 82%. Another multi-national company, Unilever, has used AI to drastically reduce its interview time by 80,000 hours and now provides unsuccessful candidates with a comprehensive report on the reasons why they were not successful (Howell, 2019). This provides the candidates with valuable information to develop themselves for their next job application and also furthers candidate engagement. According to Sage (2018), 89% of HR teams would like to be perceived as contributing to the strategic value of their organisation. Through advances such as AI, analytics and the cloud, they are able to shape the future of their organisation and demonstrate the Return on Investment (ROI) that could be obtained from investing in people (Sage, 2018). Thus, organisations and business leaders cannot ignore the fact that technology will have a transformational impact on current HR roles and practices. In order to adapt and be proactive in these changing times, organisations need to take advantage of the potential value that AI brings to the organisation. This research implores the need for HR professionals to analyse the implications of Artificial Intelligence to actively put measures in place to effectively prepare for these changes.

2.10 SOUTH AFRICA’S ADOPTION OF AI WITHIN HR

South Africa is still battling with many challenges within its economy and labour market, such as the poor quality of education, shortage of skills and the unemployment rates within the country. It may be of no surprise that South Africa is not at the forefront of the latest technologies, given the current economic conditions. Schoeman et al. (2017) support the above by asserting that South Africa is restrained by its poor education system, inadequate innovation ecosystems at a national level, and inadequate enabling infrastructure to boost development, amongst others. Makaring (2017) also affirms that despite the advanced developments in digital technology and Artificial Intelligence, South Africa is still stuck with outdated systems, corporate structures, and policies. These factors make it challenging to prepare and be agile for the AI revolution. In addition, Makaring (2017) states that the current conditions of HR seem to consist of obsolete processes and systems for recruiting, selecting, and developing personnel, as well as organisational requirements. As a result, this has given rise to fraudulent behaviours

such as nepotism and fake recruitment agencies promising jobs that do not exist (Makaring, 2017). Nonetheless, this opens the door to Artificial Intelligence to eliminate these conditions within HR to create fair and effective recruitment practices. Thus contributing to the value of automation and advanced technology such as AI to ensure that proper processes and practices are followed.

According to a research study conducted on 400 IT heads of large SA companies, there was low existing usage of new technologies such as robotics and machine learning within these organisations; however, there was a strong intent (Hedley, 2018). The author also asserts that the costs involved in the implementation were the reason for the slow adoption of robotics. An example of a large South African company that has successfully integrated AI within its processes is Standard Bank. According to Workfusion (n.d.), Standard Bank has successfully automated 100 processes through intelligent automation, which has led to a massive reduction in its account-opening times, minimised risks, as well as freeing up employees from performing routine work to enable them to focus on achieving superior customer service. Ultimately, the bank is one of the largest on the continent and has the infrastructure and financial means to adopt AI. Research conducted by Accenture found that in South Africa, there have only been isolated cases of digital technologies working alongside people and automation (Phillips et al., 2018). However, as these technologies start to become more and more accessible, so does the threat of job loss due to automation. The Accenture study found that 35% of all jobs in SA are currently at risk of being totally automated (Phillips et al., 2018). The report further found that digital adoption has mainly been used by organisations looking to cut operation costs and increase efficiencies through automation, often leading to the displacement of workers.

However, the automation of jobs also creates opportunities for the development of new jobs that require a different set of skills that may not currently be in existence. Phillips et al. (2018) suggest that if South Africa can accelerate the pace at which its workforce develops the skills appropriate for human-machine collaboration, it could decrease the number of jobs at risk from 3.5 million in the year 2025 to 2.5 million. Schoeman et al. (2017) assert that SA companies need to emphasise training and education, especially for those individuals who are unduly affected by income and employment. The authors further mention that these organisations need to advocate for the development of a code of ethics for AI, create an agile, self-improving regulatory environment that will keep up with changing technology, and integrate machine and human intelligence by reconstructing work to take full advantage of the strengths of each. Thus,

technological disruption is inevitable, and SA's existing challenges make it even more difficult for AI adoption. Therefore, in order for the workforce to adapt and remain relevant, they would need to develop the necessary skills for AI and adopt a culture of continuous learning.

2.11 THE ROLE OF COVID-19 ON THE USE OF TECHNOLOGY AND IMPLICATIONS FOR HUMAN RESOURCES

The COVID-19 pandemic has changed the way in which people do things and how they interact with others. It caused severe strain to organisations and societies at large, with negative effects on the well-being and livelihoods of individuals. Organisations were forced to rapidly adapt and respond to these challenges to ensure the survival and continuity of their businesses, as well as look out for the emotional and physical needs of their employees. Carnevale & Hatak (2020) explain that for human resource management, people managers had to swiftly dive into the unknown to help their workforce adjust and cope with these radical changes that are present in the social and work environment. The authors further state that the salient challenges of the pandemic on HRM are the adjustment of new and existing employees to the changing working conditions, including shifting to remote working environments, as well as the introduction of new workplace policies and processes that reduce the need for human contact (Carnevale & Hatak, 2020). According to Mayer (2020), embracing and allowing remote work can provide employees with the flexibility they desire, as well as help organisations broaden their talent pool, as the geographical boundaries would not matter. This has essentially ushered employees into the fourth industrial revolution, where the reliance on technology has played a pivotal role in this pandemic. Employees had to learn and adapt to using various technological platforms within a short amount of time.

Organisations are using more online platforms such as Zoom or MS Teams as a medium for communication for employees, and customers are relying on online shopping for their groceries and prescriptions (Drapeau, 2020). The author states that with the possibility of future pandemics, there is a greater focus on the use of Artificial Intelligence to perform jobs that are considered risky for humans under these circumstances (Drapeau, 2020). Another implication the pandemic had on organisations and HR is the reduction or suspension of hiring practices (Reeves, 2020; Meister, 2020). This essentially forced HR professionals to rethink their role within the recruitment and selection space as a consequence of the pandemic. For instance, traditional selection processes were adjusted which became the new normal such as the use of virtual platforms. Several global companies, such as Google and Amazon, have opted for virtual interviews as a response to the COVID-19 restrictions (Maurer, 2020).

Although many South African organisations have shifted to remote working, the inequalities in access to technology became apparent. According to Malinga (2020), the distressing impact of the COVID-19 pandemic has placed an emphasis on the state of Information and Communications Technology (ICT) in South Africa. It has created the need for the private sector and government to accelerate the shift towards digitalisation in several industries. The author further highlights that many individuals still have to use the small screen of their smartphones as an interface, and the high costs of data, despite the recent price reductions, have contributed to the digital divide. With that being said, an organisation's ability to effectively respond to crises such as the COVID-19 pandemic may be dependent on its existing technological infrastructure, making remote working and other virtual operations possible. Organisations that are able to utilise technology well and re-evaluate their future business models by accelerating digital transformations will be the ones leading their competitors (Marr, 2020). Therefore, with changes in the way work and social interactions are taking place, the need exists for organisations to adapt to technological innovations in order to better prepare for changes in society and the possibility of future pandemics such as COVID-19.

2.12 CHAPTER SUMMARY

AI is transforming the way in which HR professionals recruit and manage their employees as well as their interactions with candidates. It should be clear that the value of AI within HR is not to replace the role of the HR professional but rather to provide for more accurate and faster processes, as well as better decision-making abilities where the onus will always lie on the human to make the final judgement call. The implementation of AI in recruitment and selection not only adds a competitive edge within the HR processes but also creates momentum to gradually ease the rest of the organisation to the realities of the fourth industrial revolution. The future of HR and the workplace is changing, and organisations need to take advantage of these changes or miss out on innovative HR management systems. The next chapter will cover the research approach and methodologies that underpin this research.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the approaches that were followed in this research in order to gain more insights into the research objectives as delineated in Chapter 1. The study investigates the perceptions of HR professionals on the role of AI in the recruitment and selection process. A qualitative approach was used to gain a better understanding of the perceptions and knowledge of the research participants of this study. This chapter explains the various research paradigms and research approaches, sampling methods, data collection and analysis procedures that were utilised, the trustworthiness of the research, as well as the ethical considerations.

3.2 RESEARCH PARADIGM / PHILOSOPHY

The terms research paradigm or research philosophy are often used interchangeably. The term ‘paradigm’ was initially coined by an American philosopher named Thomas Kuhn in 1962 to describe a philosophical way of thinking (Kivunja & Kuyini, 2017). The authors further report that a researcher's worldview can be described as a perspective or set of beliefs that guide the way in which the researcher interprets the meaning of data. In other words, a research paradigm could detail the methods and approaches that shape the way in which the research is conducted. Saunders et al. (2016) refer to the term research philosophy as a set of assumptions and beliefs about the development of knowledge. Zukauskas et al. (2018) support this by stating that a scientific research philosophy is described as a system of the researchers' thoughts where new knowledge about the research is obtained. Essentially, a research paradigm or philosophy refers to the researcher's assumptions and beliefs that guide their research. When conducting a research study, the researcher usually has their own idea and viewpoint about the particular field of study in which they would like to further investigate, herewith adding to the body of knowledge. In essence, a research paradigm delineates the philosophical orientation, which has significant implications for the choices that are made throughout the research process, and this includes the choice of methodologies and approaches used (Kivunja & Kuyini, 2017).

A number of researchers provide common and contrasting views of the main types of research philosophies. Several authors refer to the following philosophies, namely positivism, pragmatism, and interpretivism, amongst others (Bryman, 2012; Creswell, 2014; Saunders et al., 2016). Each of these philosophies are connected by either a qualitative, quantitative or mixed-method research approach to data collection. Positivism is grounded on the principle

that knowledge materialises through the gathering of observable facts that are also objective (Bryman, 2012; Kivunja & Kuyini, 2017). Pragmatism as a philosophy can be associated with the mixed method approach to research and emerges from situations, actions, and consequences (Creswell, 2014). The author further states that the focus is on the research problem and, therefore, utilises various approaches available to unpack the problem itself (Creswell, 2014). Lastly, with interpretivism, there is an importance on understanding the way in which humans make sense of the world around them and how they attach meaning to their behaviours (Bryman, 2012; Kivunja & Kuyini, 2017). This type of philosophy tends to be more subjective in nature and focuses on the subject's thinking. This research study is qualitative in nature and leans towards interpretivism philosophy, with the aim being to better understand HR professionals' perceptions of the impact of Artificial Intelligence on recruitment and selection practices.

3.3 RESEARCH APPROACH

Research approaches can be described as the methods that the researcher uses to collect data and answer the research questions. Creswell (2014) highlights three main approaches to research, namely qualitative, quantitative, and mixed-method approaches. The decision between the selection of a research approach lies in the type of data the researcher intends to collect. According to Creswell (2014), the fundamental disparity between quantitative and qualitative research lies in their respective employment of numerical data versus language-based observations. Additionally, qualitative research employs open-ended inquiries, such as those used in qualitative interviews, as opposed to quantitative hypothesis, which utilises closed-ended questions (i.e., quantitative hypothesis). Additionally, Saunders et al. (2016) state that qualitative methods are synonymous with interviews, where the researcher is able to ask open-ended interview questions. In contrast, quantitative approaches normally consist of data collection through the use of a survey questionnaire. In this case, the researcher generally does not have to be present to administer a survey questionnaire, thus widening the reach for participants.

By selecting the qualitative method, the research aims to collect deep, meaningful information that is more descriptive in order to better understand the topic. Taherdoost (2022) asserts that qualitative research sets out to collect firsthand information and analyse it using various interpretive methods. The author further states that qualitative research aims to discover the latest ideas, theories and the findings of events without necessarily considering whether it is possible to generalise the results of the study (Taherdoost, 2022). Alternatively, with

quantitative methods, the research aims to collect data that attempts to explain the relationship between variables through the use of statistical analysis. When studying relationships between variables, one can ascertain various patterns in the data and could use the findings to predict future outcomes. Creswell (2014) states that these variables can be measured with the use of instruments that analyse numerical data using statistical procedures. Taherdoost (2022) asserts that although both qualitative and quantitative approaches are designed to better understand the research topic, quantitative research intends to define a phenomenon (through the collection of numerical data) that will address questions such as ‘how many’ and ‘what percentage of’, etc. In many instances, a researcher may want to make use of both research approaches. This is referred to as a mixed method approach, which can be described as the use of both quantitative and qualitative methods as a means to collect more rich data. Saunders et al. (2016) explain that in circumstances where the research approach is quantitative questionnaires, the researcher may want the participants to answer open-ended questions in their own words as opposed to just ticking a box or even deem it necessary to conduct follow-up interviews to gain a better understanding of the findings from the questionnaire. Alternatively, a researcher could make use of closed-ended questions to build on qualitative information by analysing and presenting quantitative information, such as the participants’ biographical details in the form of graphs and percentages. The use of both quantitative and qualitative research approaches would essentially contribute towards the overall strength of the study.

As mentioned above, the present study made use of the qualitative research approach to guide the study. Due to the nature of the study, the researcher decided not to utilise a quantitative approach, as this study intends to gain a better understanding of the phenomena of interest. With AI being relatively new in recruitment and selection, particularly within South Africa, data collection through quantitative methods would be difficult due to low existing usage.

3.4 POPULATION AND SAMPLE

3.4.1 Population

Vonk (2016) describes a target population as the individuals with whom we would like the findings of our research study to apply. Welman et al. (2005) describe the population as the study object that includes the individuals, groups, events, organisations, or the conditions to which they are subjected. The authors further state that the population of the study consists of the total pool of items that the researcher would like to derive certain conclusions from. Blumberg et al. (2011) support this by emphasising that a population is the total pool of characteristics with which we would like to make inferences. The target population of the

current study is all working HR professionals within South Africa. With the current population of HR professionals in the Western Cape, South Africa, it may be daunting to conduct qualitative interviews with the entire population. Therefore, it is important to select a sample of the population to make inferences about.

3.4.2 Sample and Sampling Techniques

A sample can be described as the subgroup of the target population from which the research participants are carefully selected (Islam & Aldaihani, 2022; Landreneau, 2009). The results from the sample can then be used to make inferences about the larger population. Two key sampling groups can be used in the research, namely, probability sampling and non-probability sampling. In probability sampling, each element in the target population has an independent and equal chance of being chosen (Landreneau, 2009). In other words, the participants are randomly selected to be included in the study. With a non-probability sampling method, the elements that make up the sample are chosen by means of non-random methods (Landreneau, 2009). For the current study, a non-probability sampling technique was used as it provided a sense of control over the sample.

There are several types of probability and non-probability sampling methods. However, this study will highlight the selected sampling method, which is purposive sampling. According to Mahembe (2012), the purposive sampling technique is based on the notion that the researcher wants to explore and gain a deeper understanding of the phenomenon, situation or subject. In other words, it involves finding individuals that meet the specific requirements that the researcher specifies. Demographics such as race, age and culture are not factors in this study and therefore, familiarity with the interviewee will be of limited concern. Furthermore, Landreneau (2009) highlights the term sample frame as a list of factors in the population from which the sample is drawn. The sample frame of the current study consisted of HR professionals who were based in the Western Cape, had a background in the recruitment and selection space, and worked in the retail sector. Due to the several specialised areas within the human resources management function, the focus was purely on recruitment and selection, which formed part of the criteria when sourcing the participants for this research. The sample consisted of HR professionals who were both operational and supervisory/managerial staff. The researcher also wanted the participants to have a general understanding of Artificial Intelligence in order to grasp the interview questions.

3.4.3 Sampling strategy

Landreneau (2009) defines a sampling strategy as the plan the researcher sets forth that will ensure that the chosen sample is representative of the population. It is important to note that the research approaches (i.e., qualitative and quantitative) mentioned in this chapter will also inform the sampling strategy. For instance, the objective of the current study is to gather the unique perceptions and views of the selected participants about the research topic. According to Dawson (as cited in Islam & Aldaihani, 2022) generalising the findings of the research to the entire population is not exactly the goal of most qualitative research. Therefore, the selection of a sampling strategy for a complex topic such as Artificial Intelligence in recruitment and selection is vital for ensuring the richness of the research findings as well as being able to capture diverse perspectives for the research participants. The initial sample size of the current study was 10-15 participants; however, saturation was reached at 9 participants. Guest et al. (as cited in Islam & Aldaihani, 2022) explain that data saturation is reached in the research process when no new information is gathered from the data, and the findings start to become redundant. In the current study, the researcher transcribed the interview recordings immediately after the interviews had occurred, which led to the decision to stop at 9 participants as no new information was being discovered.

3.5 DATA COLLECTION

The data collection phase plays an integral part in the research process on account that the results of the research will be able to address the research objectives and answer the research questions. Kabir (2016) explains that the data collection process involves the gathering and measuring of data on specific variables in a systematic way that allows one to answer the research questions, as well as test hypotheses and assess the results. Cln (2013) supports this by adding that the researcher should follow a systematic process because if data is collected haphazardly, it may be difficult to conclusively answer the research questions. There are various methods for the collection of data. Some of the more commonly used methods, including interviews and questionnaires (amongst others), will be discussed below:

3.5.1 Interviews

Interviewing is a form of data collection that can take place face-to-face (whether in an individual or group setting). It involves the answering of questions either in person, telephonically or through electronic devices such as computers (Kabir, 2016). In an interview, the researcher asks the interviewee (s) a set of questions guided by the research objectives. With the interview method, the researcher is able to derive rich descriptive information that

will assist with answering the research questions. In the present study, the researcher made use of the individual interviewing method by computer and telephone. The advantage of this method is that the interviewer and interviewee were able to conduct interviews from any location at their convenience. The disadvantage of this method is that one is not able to observe elements such as body language and create rapport with interviewees as compared to in-person interaction.

3.5.2 Questionnaire

A questionnaire consists of a list of questions that will inform the research study. According to Bhat (n.d.), a questionnaire is a research instrument that contains a sequence of questions as well as other prompts with the intention of gathering data from the respondents. In qualitative research, a questionnaire could consist of a list of questions that the interviewer asks the interviewee, such as an interview guide to gather descriptive information from them regarding their views on a specific topic. In quantitative research, a questionnaire could consist of a set list of questions that is self-administered to a specified sample of participants, such as a survey questionnaire. According to Lau (2017), a number of researchers still use the terms questionnaire and survey interchangeably. However, the key difference is that although both contain a set list of questions, a survey involves the process of collecting, assembling, and analysing the responses to the questionnaire. Depending on the type of research and information the researcher intends to gather, this will inform the type of questionnaire required for the study. Cln (2013) states that whilst selecting the specific questions, the researcher should first consider the type of information/data that he/she requires from the study. For instance, Preston (2009) explains that a questionnaire survey may only be appropriate for certain research questions and is dependent on the type of data and people the researcher wishes to elicit information. The author further states that the questionnaire survey is only effective when participants in the study are knowledgeable about the research topic and are competent enough to answer the questions. In the current research study, a questionnaire was utilised with a set list of questions (interview guide) to add structure to the qualitative interview. The distinction here is that the researcher was able to use the interview guide to ask open-ended questions as well as probing questions. Due to the uniqueness of the topic (i.e., Artificial Intelligence in recruitment and selection), a qualitative interview with an interview guide was considered the more suitable method for gathering data from the participants.

3.6 DATA COLLECTION PROCESS

In March 2020, the President of South Africa placed the country under a national state of disaster and implemented a national lockdown as a result of the global pandemic, i.e. COVID-19. The national lockdown required South Africans to stay at home with certain exceptions. Due to the COVID-19 restrictions, traditional face-to-face interviews, which was the initial primary data collection method, could no longer take place. Due to several external factors, such as social distancing regulations, fears of contracting COVID-19 from the participants and the researcher, and even various safety precautions that needed to be upheld at the time, the researcher decided to conduct virtual interviews. This method came with its own challenges as the use of virtual platforms was not considered the norm at the time, and the researcher had to be cognisant of the participants' needs and limitations throughout this process whilst battling with the pressures of the global pandemic. The researcher tried to make sure that the participants were aware of the new virtual process and were technologically able to access the virtual platform.

Another challenge was obtaining the signed consent forms, as all of the research participants were working from home at the time and did not have access to printers/scanners at home to sign, scan and email documents due to the pandemic. Fortunately, all participants had provided an electronic version of the consent form.

All interviews were conducted virtually through Zoom or, in one instance, WhatsApp Video call due to the participants' difficulty in accessing the Zoom link. When setting up the meeting, the researcher sent the participants calendar invites with the Zoom link. The researcher shared her computer screen with the participants to project the interview guide. In the case where the researcher had used the WhatsApp video call, the researcher decided to share her video to build rapport with the participants. Most of the interviews (excluding one) took place over 2 weeks during the end of July and beginning of August 2020. The interviews were between 15 minutes and 63 minutes in length. All interviews were voice-recorded with permission from the participants.

3.7 RESEARCH INSTRUMENT

To maintain a level of structure and ensure that all questions are answered, an interview guide was developed and used as the research instrument. The interview guide included a set list of 11 interview questions that consisted of open-ended questions (see Appendix A). As mentioned above, the data collection method that was used in the current study was semi-structured

interviews. According to Kabir (2016), an advantage of semi-structured interviews is that they provide reliable and comparable qualitative data as well as allow the interviewees to freely express their views. With the use of open-ended interview questions as part of the interview guide, the interviewees were able to elaborate and provide their views of the topic.

3.8 PILOT STUDY

A pilot study was conducted to ensure that the data collection instrument, i.e. interview guide and questions, were appropriate, clear and understandable. The researcher conducted a pilot study on 3 industry professionals who did not have to meet the sampling criteria and did not form part of the research sample. Based on the feedback and observations found in the pilot study, the researcher then adjusted the interview questions accordingly. The reasons for this were that some of the questions were ambiguous, where the researcher had to repeat the question a few times, as well as to enhance the logical flow in the interview guide. The researcher also added two questions to the initial interview guide to incorporate a factor that had an impact on all participants, which was the COVID-19 global pandemic.

3.9 DATA ANALYSIS

The purpose of analysing the data is to obtain valuable and usable information, irrespective of whether the research is qualitative or quantitative. The research approach and data collection methods are integral as this will direct the way in which the data will be analysed. Vaismoradi et al. (2013) explain that qualitative approaches seek to understand a particular phenomenon from the perspectives of the individuals experiencing it. For the current study, a thematic analysis was used to analyse the qualitative data. Braun & Clarke (as cited by Vaismoradi et al., 2013) define thematic analysis as a qualitative approach that identifies, analyses and reports on the patterns and themes emerging from within data.

According to Saunders et al. (2016), the main purpose of this approach is to search for patterns and themes that occur across data sets, such as observations, documents, interviews, or websites being analysed. Within the current study, data was collected using interviews and transcribed by hand by the researcher, and the findings from the interview transcripts were categorised and sorted into themes. The rationale for the selection of thematic analysis is due to its simplicity, straightforwardness and flexibility. Saunders et al. (2016) further explain that the use of thematic analysis is not tied to any research philosophy and approach (albeit deductive or inductive).

3.9.1 Data Analysis Process

Whilst conducting the qualitative thematic analysis, the researcher kept the objectives of the study in mind throughout the process. Once the interviews had taken place, voice recordings of the interviews were transcribed verbatim (in written format), and the researcher became more familiar with all the information retrieved from the interviews. Saunders et al. (2016) report that it is essential to arrange the interviews with sufficient time between them to allow the researcher enough time to write up the transcriptions and the notes, as well as analyse the findings before moving to the next session. This allows the researcher to reflect and better understand the information found but also allows for better data integrity where the recordings, transcripts and notes are well organised.

Furthermore, the data was coded and grouped into units of meaning at which repetitions across the raw data had formed. By doing this, themes and patterns start to emerge, which the researcher then labelled and categorised the data. Saunders et al. (2016) refer to a unit of data as a number of words, sentence (s), lines of a transcript, or a complete paragraph (amongst others) that is summed up by a specific code. When coding or labelling the themes, the researcher needed to be flexible and get a sense of the overall meaning of the data. This then led to several themes being developed. It is important to note that analysing qualitative data is normally an iterative process and may entail several iterations. Saunders et al. (2016) state that the interactive attributes of the data collection and analysis highlight important patterns, themes and relationships emerging from this process. The authors further explain that this process also entails re-categorising and coding the existing data to see whether the emergent patterns, themes and relationships are present. Lastly, the researcher then refined the themes to ensure that they represent the essence of the data and that relationships between data can be formed as well as meaningful interpretations can be made. The researcher consolidated the themes and sub-themes on an Excel spreadsheet, which is presented in tabular form in Chapter 4 of the research.

3.10 TRUSTWORTHINESS OF RESEARCH

Ensuring the quality and trustworthiness of qualitative research is essential to establishing the validity and reliability of the data. Several authors highlight the following (amongst others) common quality criteria, namely credibility, dependability, and transferability (Korstjens & Moser, 2018; McGregor, 2019; Saunders et al., 2016). Credibility refers to whether the findings of the data are considered credible and trustworthy. According to Korstjens & Moser (2018), credibility determines whether the findings of the research can be regarded as plausible

information that is retrieved from the participants' original data and interpreted accurately by the researcher. A way the researcher in the current study contributed towards the credibility of the data was during the data collection and analysis phase, and interviews were conducted and transcribed verbatim. The researcher also reflected on her understanding of what the participants said during the interview. In addition, the researcher conducted pilot testing of the interview questions, where adjustments were made to the interview guide. In terms of dependability, this refers to the reliability and consistency of the research findings. McGregor (2019) states that dependability is attributed to the stability of the research findings over time and also in changing contexts. This is supported by Saunders et al. (2016), who adds that researchers should record all changes to their research in order to produce a dependable and reliable account of the impending research focus to ensure understanding and evaluation by others. Transferability concerns the degree to which the findings of the qualitative data can be transferred to other settings and contexts with other research participants (Korstjens & Moser, 2018). It is the researcher's responsibility to provide a detailed account of the sample, research context, and the methods/approaches utilised in the research to achieve transferability. In the current study, the researcher kept an audit trail of the data to ensure transparency and openness of the research findings.

3.11 ETHICAL CONSIDERATION

In every research, the researcher must follow certain ethical guidelines to ensure that no harm is caused throughout the execution of the study. Fouka & Mantzourou (2011) refer to research ethics as protecting the dignity of the research subjects as well as the information provided. The intention behind the research was to understand the participants' perceptions of the research topic and not cause any physical, mental, emotional or any other harm. The first step in the data collection process was to obtain ethical clearance to conduct the study from the Humanities and Social Science Research Ethics Committee (HSSREC) of the University of the Western Cape (UWC). This is to ensure that the research is conducted in a manner that upholds the University's ethics policies and guidelines, which include aspects such as beneficence, non-maleficence, informed consent, anonymity and confidentiality.

Beneficence

The term beneficence refers to the ethical principle to act in the best interest of the research participant and treat them with respect and dignity. Akaranga & Makau (2016) explains that

the researcher has a responsibility to the participant to clarify the purpose and benefits of the research.

Non-maleficence

The ethical principle of non-maleficence refers to the duty of the researcher to not cause any harm to the research participant. According to Burns & Grove (as cited in Akaranga & Makau, 2016), harm may include the emotional, social, physiological, or even financial in nature. With the current study, the intention behind the research is not to cause any harm to those involved nor does the researcher foresee any potential harm that may be caused.

Informed Consent

The researcher obtained signed informed consent from the participants, informing them of the purpose of the study, as well as how the information is collected and utilised. An informed consent document is an agreement between the researcher and the participant that aims to protect the rights of the participant as well as ensure that participation in the study is completely voluntary. According to Fouka & Mantzorou (2011), the intention behind informed consent is to “incorporate the rights of autonomous individuals through self-determination”. In other words, the participants are given all the information regarding the study and have the freedom to determine whether they will participate or not. In respect of the participants of this research, they were informed of their right to withdraw their participation at any time during the research.

Anonymity and Confidentiality

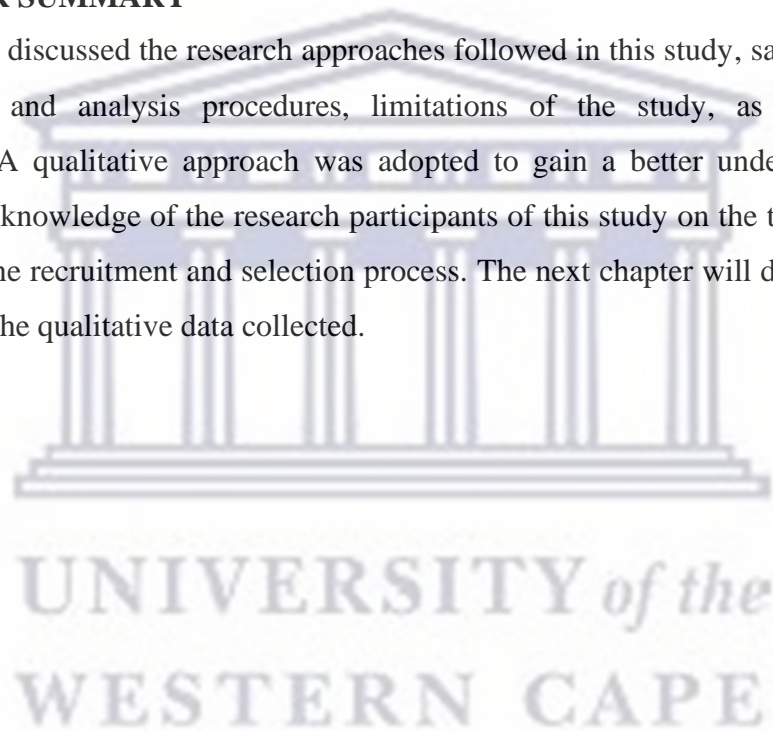
Furthermore, Mugenda (as cited in Akaranga & Makau, 2016) explains that anonymity is withholding any identifiable information about the respondents, such as their names or any sensitive information about them. The participant’s anonymity is of utmost importance and is maintained throughout the study. In making sure that ethical guidelines are followed, the researcher has not included the names of the participants nor the organisations they work for in the research. The researcher labelled each participant, including recordings, notes and observations, under a pseudonym to ensure that there is no identifiable information about the participants. The information that is gathered will only be viewed by the researcher and the supervisor. The details about confidentiality and how the data will be stored are explained on the information sheet as part of the informed consent documents. The researcher also tried to

ensure that information was handled with integrity and care throughout the collection, analysis and reporting processes of the research.

Lastly, it is important to acknowledge the challenges experienced during the data collection process, which took place during the COVID-19 pandemic. The researcher tried her best to uphold ethical principles whilst ensuring that participants were not placed under further duress as a result of COVID-19 restrictions. All interactions with participants were virtual, and permission was obtained via digital platforms. All documents received from participants are stored electronically under password protection.

3.12 CHAPTER SUMMARY

This chapter has discussed the research approaches followed in this study, sampling methods, data collection and analysis procedures, limitations of the study, as well as ethical considerations. A qualitative approach was adopted to gain a better understanding of the perceptions and knowledge of the research participants of this study on the topic of Artificial Intelligence in the recruitment and selection process. The next chapter will discuss the results and findings of the qualitative data collected.



CHAPTER 4

DATA ANALYSIS, FINDINGS AND RESULTS

4.1 INTRODUCTION

This chapter reports and analyses the data collected and presents the findings of the study that was conducted. The findings of the research are presented as an analysis of the qualitative interviews that were collected. As stated in the previous chapter, this method was chosen to provide an in-depth understanding of the perceptions of HR professionals on the role of AI in the recruitment and selection process. The findings of the study are organised based on the following research objectives and presented according to the main themes and sub-themes that emerged during the data analysis.

The research objectives are:

- To investigate HR professionals' perception of AI in recruitment and selection.
- To explore the impact of AI on Recruitment and Selection practices.
- To determine the perceived level of preparedness and adoption on the use of AI in recruitment and selection (from a South African perspective).
- To explore what can be done to prepare employees and candidates for the use of AI in recruitment and selection.

4.2 DEMOGRAPHIC INFORMATION OF PARTICIPANTS

The table below includes the demographical information of the participants included in the study. The participant's information includes the following: age range, gender, job title, years of experience and education. Although the participant characteristics such as age, gender, job title, education and years of experience are not the primary focus of this research study, it may provide some insights into understanding the backgrounds of the participants.

Table 4.1*Participant Information*

Participants	Age range (years)	Gender	Job title	Years of experience	Education
Participant 1	25-29	F	HR Business Partner	3	BCom Honours
Participant 2	25-29	F	HR Assistant	2	B. Admin
Participant 3	40-44	F	Industrial Psychologist	21	MCom
Participant 4	25-29	M	HR Administrator	3	BCom Honours
Participant 5	35-39	F	HR Manager	15	BTech HR
Participant 6	20-24	F	HR Administrator	2	BCom Honours
Participant 7	25-29	F	HR Consultant	3	BCom Honours
Participant 8	40-44	M	Regional HR Manager	23	MCom
Participant 9	25-29	F	HR Business Partner	3	BCom Honours

Note. M=Male; F=Female

4.3 THEMES AND SUB-THEMES

Table 4.2 provides an overview of the main themes and sub-themes that have emerged from the data. The themes in the table were split into main and subcategories, which were guided by the aforementioned research objectives. It consisted of the following: HR professionals' perceptions and experience with AI; perceived benefits and risks associated with AI; perceived factors for AI readiness in SA as well as the resistance to AI adoption; measures to prepare and increase AI adoption within recruitment and selection, and lastly the impact of COVID 19 on the recruitment and selection process as experienced by the HR professionals.

Table 4.2*Themes and Sub-themes*

Main category/theme	Sub-category/theme
HR Professionals' Perceptions of AI	Technology/System based
	Optimisation and Automation
	Lack of human factor
HR Professionals' Experience with AI	Recruitment and Selection space
	Systems / Online Tools
Perceived benefits associated with Artificial Intelligence	Efficiency
	Time management
Perceived risks associated with AI	Lack of physical/human interaction
	Technical/ system complications
Perceived factors for AI readiness in SA	Generational differences
	Access to technology and resources
Perceived resistance to AI adoption	High Costs of AI
	Lack of education and awareness
Measures to prepare and increase AI adoption within recruitment and selection.	Training and development
	Education and Awareness
	Change management
Impact of COVID-19 on the Recruitment and Selection process	-

4.3.1 HR Professionals' Perceptions of AI

It was apparent from the responses that the HR professionals/participants had a general understanding of Artificial Intelligence. The main theme of this section discusses HR professionals' perceptions of Artificial Intelligence. Several sub-themes emerged from the findings on HR professionals' understanding and association with the term AI, namely, technology/system-based, automation/optimisation, and the lack of human factors.

Technology/System based

This theme relates the basis of technology or systems and its association with Artificial Intelligence from the HR professionals' perspective. The participants held a view that Artificial Intelligence is either technology or systems-based intelligence that is able to perform various functions and tasks that are normally performed by a human being. It is generally used to provide support and assistance to humans and simplify processes to make things easier. These views are quoted below:

Participant 1: *“Technology programmed and coded to perform tasks that are usually performed by or associated with human intelligence. The technology can access all known information from any data source to research in order to perform the task.”*

Participant 2: *“When you are using technology to do certain things that a person would ordinarily do, so a lot of websites have a chat functionality where you actually chatting to a robot that's Artificial Intelligence – you make use of key words and stuff like that to get a robot to answer you.”*

Participant 4: *“My understanding is that AI is basically everything that is computer based in terms of systems and the different things that would make the lives of human beings easier and even more so has the potential to replace. It's basically just simplifying everything that us as humans do on a daily basis, making it easier to do certain processes or doing whatever it is that needs to be done.”*

Participant 5: *“Artificial intelligence for us is primarily systems-based engineering that facilitates various processes, I know you are working primarily on recruitment and selection, but artificial intelligence can be used throughout the HR function, so we have it on the payroll side of things where we manage personnel information, AI is basically how we all get paid in the business. With the recruitment side of the it is via the career portal and all the other portals that exist that help us manage applications but also advertisements that go out and also how we manage our image and reputation out there by virtue of post from the business side.”*

Participant 6: *“Technology and computers and trying to communicate artificially.”*

Participant 7: *“In a nutshell, it is a system or a man-made feature to assist (from an HR point of view) HR professionals dealing with candidates for example we have a system that basically feeds through where we will receive an influx of CV’s or multiple CV’s at a given time so basically what the system automatically does is it picks up screening questions and it will pick up if you don’t meet the minimum requirements and it automatically rejects, what is cool about this tool is that if you sent the advert or link out it identifies key points on the CV. For example, if you state in the job description that you need to have 5 competencies, you need to have your master’s degree- it will pick that up on your CV and it will show if the level is 100 percent or 80 percent match.”*

Participant 8: *“So, I would say that it is a system type of technology to assist HR or people in general in terms of shaping the outputs that we would want.”*

Participant 9: *“My understanding would be anything that is using technology through computers to detect information or to gather information. It’s almost like robots but not the conventional one that we know.”*

Optimisation and Automation

The theme of this discussion centres around the optimisation and automation of HR practices through the use of AI, as perceived by HR professionals. Participants in the discussion expressed the belief that there is a current need for Artificial Intelligence in recruitment and selection practices. One of the primary reasons for incorporating AI in the recruitment and selection space is to optimise and automate certain tasks and processes, which allows for quicker and more efficient operations. For instance, administrative and repetitive tasks, such as sifting through CVs, can be easily automated. It is important to note that according to Participant 7, the incorporation of AI into recruitment and selection practices is dependent on the size of the organisation. Smaller companies may not require advanced technology, such as AI, due to the associated costs. The following can be viewed in the excerpts below:

Participant 1: *“AI in the recruitment space will be able to find and shortlist candidates according to requirements of the job much faster and accurately. It could possibly also determine culture fit by gathering data from various social platforms on candidates.”*

Participant 3: *“I think where there is pure administration and when you are almost let's say compressing your processes, when you know there is no risk- those would be great because it would give you speed to market as our SLA's is what impacts candidate experiences.”*

Participant 4: *“So there definitely is a need. For instance, for certain positions let me take the lowest level within the store, what we call a P40 shop assistant right, so those are the people that cover the floor and needed to interact with the customers that basically get an hourly rate. So, when you advertise on the system that goes out onto Indeed and all of these places – you get 100's and 100's of CV's and you can't physically go sit and filter through 100's of CV's right cos you obviously have to fill this position within a certain time- you can't be sitting for months trying to fill this one position and because this store obviously gets impacted because they need people to cover the store because if the stores not covered there is chances of stock being lost and all of that. In order to fast track the screening process, it definitely is needed because AI can pick up certain things.”*

Participant 5: *“I would say yes, but the level of sophistication is key to what extent you are going to automate, and depending on the level of the role and there are different levels of sophistication of your candidates, and you would have to run some serious algorithm's to discern from the various from the various job titles within a CV, simply because there are so many different names for the same thing”*

Participant 6: *“it's always good to have a backup plan in case the actual humans that are busy working in the recruitment and selection processes gets busy with other things so it's always good to have a backup plan especially when work becomes repetitive, you would rather want a programme that would automatically have that process done for you as opposed to have an actual personnel doing that over and over”*

Participant 7: *“So cost, mindset, company size, but also technology.”*

Lack of human factor

This particular theme revolves around the issue of insufficient human involvement in certain tasks carried out by AI. While the majority opinion argues in favour of using AI in recruitment and selection processes, it should be recognised that some individuals have expressed concern that AI may remove the crucial human element that computers and technology are incapable of replicating. The opinions expressed above are presented below:

Participant 2: *“I don’t think for the entire recruitment and selection process because if you are using Artificial intelligence, it cuts out the human element. You know sometimes you get a sixth sense about a person and there is certain things you can tell by interacting with a person that you wouldn’t get with AI. So, for the entire process I don’t think so but for certain parts of it its possible.”*

Participant 3: *“I think it is critical that we get smarter in introducing AI but not where there are critical engagements needed.”*

Participant 6: *“sometimes artificial intelligence is also taking away knowledge- yes, it is increasing people’s knowledge in them figuring out robots and technology and all this is going to take away our mundane tasks in having them programme it and do it. Sometimes it is critical for a human being to just do those normal tasks themselves.”*

4.3.2 HR Professionals’ Experience with AI

The common theme from the participants is that they have experienced Artificial Intelligence to some extent, whether on a professional level in their current or previous roles or on a personal level, such as when using their cell phones for gaming or voice assistants powered by AI. This section highlights the HR professionals’ experience with AI. It is split into two sub-themes, namely, the experience in the recruitment and selection space and experience with various systems and online tools that extend beyond just the recruitment and selection phase.

Recruitment and selection space

This theme relates to the basis of HR professional's experience with AI in the recruitment and selection space. The participants indicated that they had some experience with AI at some point

in the recruitment and selection process, for instance, when it comes to the filtering out and screening of CVs, instead of having to do some of these processes manually, moving away from paper-based psychometric assessments to online assessments and the use of job search platforms to source candidates. The above views are quoted below:

Participant 1: *“if LinkedIn Recruiter can be seen as a sort of AI, then yes.”*

Participant 3: *“Yes, I do, if you look at some of our psychometric tools, they went from paper based and they further became online tools.”*

Participant 4: *“Within the work environment I said minimalistic to a certain extent because when it comes to recruitment yes, we would make use of a system to filter out CV’s that won’t be applicable for a certain position but you still have to physically go look at the CV to see that is this person actually suitable for this position so there’s still a human aspect that has to go into it regardless of the nitty and gritty of what has been implemented in the system to make it easier.”*

Participant 5: *“I have had experience with other portals such as box standards, careers 24, career junction, in my personal capacity as an end user of PNET where I was the candidate. I haven't done recruitment at the back-office side of things, then more from the employer perspective I've worked on a couple things specifically for employer portals so lots of companies tend to use a basis so an oracle base system that they will customize to their particular needs and the brand that they want to portray.”*

Participant 7: *“Yes, I do have experience. I was at [previous company] when I did my internship and then I moved to [current company] at which I done everything manually, so it was manual recruitment, there was no system in place, and it was very outdated I'd say. And now coming back to my current company, it was a big change for me in having to go to technology and systems as opposed to doing everything manually. I do have experience with our system and recruitment tool which is called Talent Connect.”*

Participant 8: *“Yes, there is a new app that we are dealing with at the moment, we are actually piloting one for next week where we are recruiting nine trainees and the proficiency testing is online using the app so you can view the app as artificial*

intelligence. I had to conduct the proficiency test myself- it was paper based but now online. It measures your numeracy skills and problem-solving skills, language skills etc. they can do it on a computer or phone- there are obviously flaws in that I can't be there to see if they have the answers in front of them- so that's a downside."

Systems / Online Tools

This theme relates to the use of systems and online tools in the role of the HR professional. The use of systems and online tools is a cross-cutting theme that HR professionals use, albeit in the recruitment and selection space. There are overlaps with the previous sub-theme in the findings with the use of various tools and systems throughout the HR function, not just limited to the recruitment and selection phase. For instance, participant 3 and 8 mentions the move from paper-based processes to the use of online tools in the assessment process. Participant 2 and 5 also highlights having experience with online tools through chatbots and the interview process being on virtual platforms. Participant 3 asserts the use of an employee engagement tool for surveying purposes that uses a form of AI, specifically performing the synthesis part. Lastly, participant 5 refers to an HR information system that essentially manages the employee life cycle from recruitment to retirement. The whole process is fully automated. Thus, one can deduce that the role of an HR professional and the use of systems and tools are synonymous and vital to meeting the demands of the role, especially with evolving technology such as automation and AI, making processes more efficient and simplified. A few of the above views are shown in the excerpts below:

Participant 2: "Yes, for instance using a chatbot like that I have used those before and we also have made use of this tool that allowed you to do a video interview, so a short video interview where we asked a few questions and then the candidate was meant to answer a few questions by doing a short video and uploading this for screening purposes we made use of this."

Participant 3: "I do, if you look at some of our psychometric tools, they went from paper based and they further became online tools. Another example would be things like surveying that we've done so if you look at employee engagement tools it also uses surveying tool which is also a form of AI I would imagine on the basis that it is technology that is doing some of the synthesis for us."

Participant 5: *“Yes, more so now with COVID 19 and virtual interviews... I’ve been part of a project team that rolled-out Workday- so Work-day is referred to as an HRIS systems which is HR information system and essentially that manages what we refer to as the employee-life cycle which is end to end- from birth to death essentially in the business based purely off a org unit. “*

4.3.3 Perceived benefits associated with Artificial Intelligence

This section encompasses the perceived benefits of AI in recruitment and selection, as reported by HR professionals. The positive aspects and effectiveness of AI are acknowledged, with a particular emphasis on its role in improving efficiency and accelerating processes. The findings reveal two common benefits or sub-themes of AI in recruitment and selection, namely efficiency and time management.

Efficiency

The theme of efficiency emerges as one of the perceived benefits of AI in recruitment and selection. According to the Cambridge Dictionary, efficiency refers to the “quality of achieving the largest amount of useful work using as little energy, fuel, effort, etc. as possible”. Participants 4 and 7 highlight the achievement of efficiency when a system can eliminate paperwork and repetitive tasks, such as sifting through large volumes of CVs while selecting the best candidate accurately and quickly. Participant 5 adds that measuring the time spent on recruitment, the impact of the role, and the costs of hiring a person enables one to see the return on investment quickly. Some of the participants' comments are cited below:

Participant 4: *“We make use of a lot of systems and systems as you know eliminates a lot of paperwork and having to do all of those admin aspects. For instance, making use of google drive instead of printing out countless of paper and storing it – you just go to the drive and share it to the regional managers, it just makes for efficiency so I think that’s how we can benefit from that aspect of AI which is efficiency.”*

Participant 5: *“efficiency, productivity, speed, and making it a little more objective. One thing that’s very important is you would be able to measure and evaluate and very quickly*

see your return on investment is- the amount of time that you would normally spend recruiting versus the impact that the role has versus the cost of actually recruiting that person more easily.”

Participant 7: *“In terms of efficiency, I would say time so the fact that you don’t have to go through millions of CV’s that did not meet the minimum requirements and that’s not from a good pool of candidates with artificial intelligence and with our system, it discards all of that and you get good quality candidates, if the code and system is correct. So, what I would do is if I do see that the CV is 80 percent match or 100 percent match with the potential candidate that we want, I would have a look at it, I don’t always rely on that because it could be that it is just the wording of the CV. However, I do feel that’s its beneficial in the fact that it reduces time now HR people can basically use that time and focus on more strategic things. So, I love that the system allows for ad hoc duty like screening of CV’s is basically ad hoc, I think that the fact that its giving you quality candidates, time, cost effectiveness as well in the sense that everything is in the system, you don’t have to rely on recruitment agencies”*

Time management

This theme relates to time management being one of the perceived benefits of AI. The Cambridge Dictionary defines time management as “the practice of using the time that you have available in a useful and effective way, especially in your work”. As per the observations of the participants, the primary advantage of AI is its ability to save time in numerous processes and expedite the implementation of AI systems when one compares the time it would normally take to complete a simple task. Participants 1, 2, 3, 5, 6, 7, 8 and 9 have reported that AI tools can be utilised to accomplish tasks such as screening, shortlisting, performing calculations accurately and quickly, and even filling critical positions. According to participants 6 and 7, this allows HR professionals more time to focus on strategic or significant tasks. Participants 3 and 7 have also noted that AI tools enhance the speed of response times and decision-making processes, resulting in an improved candidate experience. A few of the above views are quoted below:

Participant 1: *“Yes, it will definitely save time and be more efficient and accurate. For example, AI in recruitment space will be able to find and shortlist candidates according to requirements of the job much faster and accurately.”*

Participant 2: *“Scheduling time for interviews is very difficult a lot of the time- so it will save some time.”*

Participant 3: *“And then for the candidate- the experience of the candidate where a lot of them have possibly based on how talented they are they have more than our employer to consider as an option and if our process lags based on the fact that too much human intervention creates a lag to the decision-making process which is the selection process.”*

Participant 6: *“It will definitely help with time management so if HR uses artificial intelligence all the minor and smaller tasks can be taken care of so then whoever the HR manager or HR person can focus on the bigger tasks or more important tasks at hand.”*

Participant 7: *“I do feel that’s its beneficial in the fact that it reduces time now HR people can basically use that time and focus on more strategic things.”*

Participant 8: *“Save a lot of time..”*

Participant 9: *“Streamlining processes and making everything convenient. Also, to sift your data more easily and it will save you time.”*

4.3.4 Perceived risks associated with AI

This section encompasses HR professionals’ perceived risks associated with AI in recruitment and selection. It acknowledges the concerns that may arise with the implementation and use of AI-based tools and systems. These include the lack of physical/human interaction, which provides an impersonal feel for the candidate and technical or system issues that can occur with any technological product.

Lack of physical/human interaction

This theme delves into the concerns that HR professionals may have regarding the use of AI in recruitment and selection. One of the major perceived risks is the lack of physical or human interaction involved in the process. According to participants 2, 3, 5, 7, and 9, this poses various risks. When the human element is removed, it becomes necessary to rely solely on AI to produce accurate results. However, a bug in the code could lead to inaccuracies. Additionally, AI may not be able to pick up on certain nuances that are essential for culture or personality fit, leading to potential mismatches. Some individuals may also view AI processes and automated responses as too impersonal, especially those who prefer a more engaging interaction. A few of the opinions expressed by the participants are provided below:

Participant 2: *“Like I mentioned before the physical interaction with the person as opposed to cutting that out and having no sense of the persons fit for example. Fit isn’t something you can necessarily pick out by having a conversation with somebody over the phone or watching someone- is it something you pick up especially the little things that you pick when you are having face to face interaction that you wouldn’t necessarily be able to pick up when using AI.”*

Participant 3: *“There is always a risk with AI because the minute you remove the human contact or interaction or even you trust the accuracy level- if you have a coding bug in anything you develop from an AI perspective if there is a bug it could create inaccuracy and that could always impact on everything. The second thing is that what AI does do is that it removes or distance the connection between personal and human interaction.”*

Participant 5: *“I think it's difficult to say the risks of AI as it's so much part of our lives. Its a soft comment I'm going to make as it is a people thing, so you still want that human touch cos at the end of the day the person is going to work as part of the organisation and even though there are many folk out there – generation X-Y- Z that like answering questions on an email or questionnaires so that they could just get it out the way but it's also the very same people that's going to say no, nobody told me and nobody explained to me. So, there is still that requirement for that human intervention and that engagement – they still want it, but they want it in a different way.”*

Participant 7: *“There also a lot of system errors which causes backlog, and I know of people that feel its very impersonal due to the automated response.”*

Participant 9: *“With recruitment it should be, let’s say for you to get to know the person on a personal level it will impact your selection process with AI. – takes away human element”.*

Technical/ system complications

This theme relates to the technical/ system complications being one of the perceived risks associated with the use of AI. Several participants (participants 3, 4, 6, and 7) expressed concerns about the potential technical and system issues that may arise when using AI in recruitment and selection. They emphasised that if the system is not programmed correctly, it could have a negative impact on the recruitment and selection process, resulting in the loss of quality candidates. Additionally, participant 6 pointed out that systems and technologies are not always reliable and may fail. Furthermore, participants 4 and 8 highlighted that the use of AI is dependent on how it is utilised, as humans ultimately control it. Here are a few of the participants' opinions on this matter:

Participant 3: *“There is always a risk with AI because the minute you remove the human contact or interaction or even you trust the accuracy level- if you have a coding bug in anything you develop from an AI perspective if there is a bug it could create inaccuracy and that could always impact on everything.”*

Participant 4: *“If the programme or system is programmed correctly and you as the user uses it correctly then it is very helpful, but at the same time if it is a system that you aren’t trained on or that you aren’t using correctly then it might just happen that you miss very good candidates that you could have given a chance or interviewed.”*

Participant 6: *“I think if we are going to use artificial intelligence, we must remember that it us a computer and computers are going to make mistakes- they are going to break down, shut down, they are not reliable, it there is an electricity cut that robot is off as well. The risks can be that maybe your work wasn’t saved or captured correctly even though it is automated- data can be captured incorrectly or data cannot be captured at*

all sometimes it won't be saved. ... You know with a computer, they only know what the smartest person has programmed into them so they don't know any depth or flexibility or adjustment, so if a computer is trying to capture all these unique aspects of a candidate in the recruitment process so every candidate is going to be the exactly the same and you won't be able to pick up which is the best candidate for the job."

Participant 7: *"If you are adapting the system and you feeding through exactly what you want- you thinking you want a certain output but that's not always going to happen. For example, if you have a CV and you put a set of words down, and the system says it's a 100 percent match, and you click on it and see all the words there and all the things that it matches such as the competencies that you want, however if you go further down to the CV's you'll see that those individuals have just as much potential, its only because of how they worded their CV. It could discard potential candidates which is quality candidates – it could be in terms of this. So, when doing the screening you also have to just check. With technology and systems anything can go wrong so I think having to have a back-up and making sure that the system- it's basically a click of a button that can change everything."*

4.3.5 Perceived factors for AI readiness in SA

This section encompasses HR professionals' perceived factors for AI readiness from an individual level. Two sub-themes emerged from the data that indicate the factors that play a role in the candidate's preparedness for the use of AI within the recruitment and selection process. The responses received from the participants provided conflicting views on the candidate's readiness for AI technologies. The main themes that emerged from the findings are the generational differences and access to technology and resources affecting their readiness, as discussed below.

Generational differences

This theme relates to the generational differences that influence potential candidates' preparedness and readiness for the introduction of AI within the recruitment and selection space. Several participants (1, 3, 4, and 5) mention the age factor when it comes to AI readiness. For instance, these participants held the view that the younger generation might be more excited

about the introduction of new technologies as opposed to the older generations. Participants 3 and 8 indicate that educating individuals on how to use the technology will help with this. A few of the above views are quoted below:

Participant 1: *“I think it depends on the age of the individual and the generation they come from. I think the later generations are ready for this and we often underestimate that. Recently companies have incorporated AI in certain retail and Fast-Moving Consumer Goods shops (such as Zara) and just observing this the newer generations, although being wowed by it, they got used to it quite quickly.”*

Participant 3: *“I think that if we are busy recruiting generationally, such as generational factors, the readiness is higher with your later generations versus your generations prior to that. I think education will get everyone aligned that’s the OD way. The organisational development way of change management is to just educate, give people enough information to understand what the platforms are, therefore why are they there, then people won’t feel as overwhelmed.”*

Participant 4: *“I think it is a give and take specifically when it comes to the retail space and I say that because with the demographics employed into the retail space in store level- if you implement AI our staff complement is generally young, so these are people who know technology and who’s excited for technology and about getting new things and working with new things- anything that would make their life simpler.”*

Participant 5: *“The aversion generally comes in where the more mature population so from an age perspective, but the younger people are on Facebook, WhatsApp, they know how to take photos. There are times where we would say take a photo of your certificate and send it to me so I can upload it- which maybe they come from less disadvantaged backgrounds, but it doesn't make them less tech savvy.”*

Participant 8: *“They are not prepared because they do not know the process, they just have to be educated right then and there. So, whoever’s adopting the “app”, we just need to make sure that whoever’s going to be using it we need to educate them accordingly.”*

Access to technology and resources

This theme relates to the candidates' access to technology and resources that may influence their level of preparedness and readiness for the use of AI within the recruitment and selection space. Given South Africa's socio-economic conditions, it is not surprising that there are still individuals who are impacted by the lack of access to the needed technology and resources when applying for a job. For instance, participants 2, 4 and 7 highlight that from the South African perspective, disadvantaged candidates may not have access to the resources to be able to utilise AI or even participate in the recruitment and selection process. Furthermore, individuals may lack the knowledge of how to use such platforms. As a result, education is crucial to promoting the readiness and adoption of AI platforms within the recruitment and selection space. Nevertheless, organisations must also be aware of the diverse backgrounds that participants come from when selecting recruitment platforms. A few of the above views are quoted below:

Participant 2: *“so all employees or candidates wouldn't necessarily have access to a computer or a laptop or even a smartphone. We often take it for granted and assume people have access to these things but some actually have to go to internet cafes or to borrow someone's laptop.”*

Participant 4: *“there are challenges with getting them to use it due to access to certain things to make use of the platform or the technology and AI that's available to them. For example, not necessarily related much to AI but just to give you a sense of what I'm talking about so let's say something like a WhatsApp video call- so yes that functionality is there and you able to do the interview on the candidate but now there is a risk of the person being in an environment that isn't really or does not have enough network coverage so now the person can't answer the call or doesn't have enough data and doesn't have money to buy the data to be able to receive the call.”*

Participant 7: *“I think for some of it, it depends on the role-some candidates are okay with-it others are not. It's because if the system requires you to let's say have an email, it does eliminate, and this can be a disadvantage for some people who don't have the technology- if they don't have access to an email, phone or computer and so forth. And this type of job i.e., sales associate, doesn't require you to know technology or systems*

as part of the job. And maybe it requires you to have email, but you don't have it so its kind eliminating them as they don't have access."

Participant 9: *"Not everyone has access to it because the division in SA is so big, there are so many people living in rural areas that may not have access to the technology that will enable them to use AI."*

4.3.6 Perceived resistance to AI adoption

This section encompasses factors for the resistance to AI adoption in human resources within companies in SA. Two common sub-themes emerged from the data, which focus on the resistance to AI adoption due to the perceived high costs associated with AI technology and the lack of education and awareness about AI.

High Costs of AI

This theme refers to the costs associated with implementing AI-powered technology within organisations and how it contributes to resistance to AI adoption. Many people assume that AI is expensive to implement within organisations, but this perception is not entirely accurate. Participants 1, 2, 4, 6, 7, and 9 noted that costs are a significant factor that hinders companies in South Africa from using AI within the HR operation. However, participant 3 pointed out that upfront costs are necessary, and businesses can receive their return on investment in the future. Additionally, participant 7 mentioned that the decision to implement AI systems depends on the size of the organisation and whether it makes financial sense. Here are a few quotes from the participants regarding this issue:

Participant 1: *"Costs- these IT applications are expensive, and companies might still find it cheaper to employ people".*

Participant 2: *"But cost is the biggest factor as well as where we are in the world as a country- we're at a different level than a first world country."*

Participant 3: *"people think it is going to be the most expensive thing, but it is upfront expensive, but you get your ROI in the future. You pay the expense now, but you gain the*

reward over 20 years versus if you look at the cost of human labour and you extrapolate that over 10 years- the cost in the future is bigger...”

Participant 4: *“It does take a lot of money to implement number 1, it’s the AI that needs to be installed and implemented, people need to get trained on it, and then obviously you do still run the risks of all these things not being used properly...”*

Participant 7: *“I would say it depends on how large the company is, so some companies don’t necessarily need to because they now as big. If I look at my previous company, it was basically 14 stores in the entire South Africa which is very small. I would also say costing, although you get some cost effectiveness in terms of processes but the cost to obtain an AI system, and a license so what happens is that the system is already out there, but you have to tweak it, change it or adapt it to your brand. So, we have a system that we changed into our brand – so that it’s a brand fit i.e. the company colours. So, most companies don’t have the funds to invest in a system like that...”*

Participant 9: *“...Also, the costs involved.”*

Lack of education and awareness

This theme refers to the lack of education and awareness about AI contributing towards the resistance to AI adoption. The lack of awareness and unfamiliarity with AI contributes towards the fears that people may have around AI. Many people are afraid of AI due to a lack of awareness and unfamiliarity with technology. This fear includes concerns about AI taking over people's jobs and resulting in job loss. Additionally, people may be hesitant to embrace new technology because they lack knowledge about AI. Participant 3 suggests that education can help create awareness about the value of AI for South African businesses. Similarly, participant 7 notes that people's negative mindset towards AI is hindering adoption as they fail to recognise its benefits. This can be viewed in the excerpts below:

Participant 1: *“The fear of increasing unemployment in SA, the fear of AI taking our jobs, letting AI into the company, can we trust it? Etc. Unfamiliarity with AI”*

Participant 3: *“The first thing is education, everybody does not know what artificial intelligence is when they hear the word AI, they assume that it is a computer that has an eye and a body that can move like a human being which is more than that as AI is anything that allows you to use technology to synthesise outputs. If you educate South African business to show them the value of speed to market the opportunity to reduce expenses and costs...”*

Participant 7: *“... mindset, company size, but also technology. So, it is a lot of errors that could happen it’s a risk in general especially if you are not familiar with it. So even if you do your research, you not 100 percent sure.”*

Participant 8: *“I think it is more to do with the companies are not aware of AI, and the companies are not technologically abled to implement artificial intelligence software/programmes.”*

4.3.7 Measures to prepare and increase AI adoption within recruitment and selection

This section covers the measures that HR departments can put into place to prepare their employees and candidates for the use of AI within the organisation. The themes that emerged from the data are the need for training and development, change management and education and awareness to increase AI preparedness and adoption.

Training and development

The findings demonstrated that most participants (2, 4, 6, 7, 8 and 9) held the view that when implementing new technologies such as AI, training and development initiatives should be rolled out within the organisation to upskill staff on the use of these systems. This will help prepare them for how the system will work and may increase adoption rates. For instance, participant 6 and 8 indicates the use of electronic learning or online learning as a medium for training initiatives. For future candidates, participant 6 also reports that the organisation provides access to training for the candidates, whether online, on the company website or providing transportation for those who do not have access. In addition, participant 2 also adds that organisations could make a space available for candidates who may not have access to laptops or the internet to do their screening. A few of the above views are quoted below:

Participant 2: *“So maybe organisations could have a space available for candidates who maybe don’t have access to internet or laptops to do their screening video or whatever the case may be to do it there with somebody just guiding them and telling them how it actually works so that they are able to make use of the functionality.*

To prepare internal staff they would need training on the technology and also a lot of change management is required to get candidates or even internal employees to change to a different way of doing...”

Participant 4: *“From an organisational point of view is to give them the needed training, spend the money that needs to be spent because at the end of the day it is an investment, if it is that you want productivity and efficiency in your environment you have to fork out and put in those measures, create training opportunities which is actually what we do- we constantly provide different types of training for our staff in order for them to be upskilled. Give them the opportunity to be trained on these different systems and technologies used in the store and workplace because at the end of the day it is them making use of the technology and has to use it for operations to flow and to be effective.”*

Participant 6: *“What really would help is training programmes. Maybe if the person doesn’t have transportation to get to the training maybe the company can provide certain sessions online or on the company’s website and maybe training tools and techniques that will prepare the candidates for future AI use in the recruitment and selection process. The training also applies for the employees- so they would have to do training on us.”*

Participant 7: *“Also, training is important and manuals on how to use it. Train how to use it.”*

Participant 8: *“At the moment we have something called e-learning so the managers would login so electronic learning- if it’s going to be rolled out across the company then using eLearning.”*

Participant 9: *“For employees, more training and putting things online and making things more accessible and working on the business intelligence as well as encouraging us to do things with AI more than we have been.”*

Change Management

Change management is a process that assists individuals in adapting to new situations, particularly during major organisational changes such as the introduction of new systems and technologies. As Chapter 2 of this research emphasises, change management interventions are necessary to create awareness about AI and encourage staff to adopt it while reducing resistance to change. Participants 1, 2, and 5 agree that significant change management efforts are required to prepare the organisation for the transition and encourage employees to adapt to a new way of doing things. Participant 5 also highlights the importance of effective communication in disseminating information about these changes. Quoted below are a few of the views expressed by the aforementioned participants:

Participant 1: *“I think it’s a matter of change management. Hopefully the company has already gone through some sort of HR modernisation process where certain human processes were automated. Change management by slowly introducing the idea and concept into the employees of the company (Preparing for the change), Show the employees what it would look like practically in the workplace and outline all implications negative and positive.”*

Participant 2: *“To prepare internal staff they would need training on the technology and also a lot of change management is required to get candidates or even internal employees to change to a different way of doing.”*

Participant 5: *“It is a lot of change management that needs to happen, so it always comes down to communicate, communicate, communicate- how this will possibly impact your working life, your personal life, your career aspirations. When it comes to engaging your candidates the same thing. If they go to the career's portal on the website, there is that notice that says new portal coming soon, you will be able to apply via whatever the case may be. So, it is about sharing the benefit, sharing the energy, why this is good and how you speak to people.”*

Education and Awareness

Another theme and key measure for AI adoption is education and awareness. Education and awareness in this regard are providing people with knowledge and information about Artificial Intelligence in order for them to understand it. By providing knowledge and information to internal employees and candidates on the use of AI may help with a mindset shift about AI, prepare them for how the system works, and also alleviate any anxiety and fears around the new system. Participant 4 reports that for future candidates, the school curriculum should be adapted to include subjects such as coding. A few of the above views are quoted below:

Participant 3: *“At the end of the day, education is everything, education alleviates any area of anxiety and risks as well as apprehension and resistance. So, if you give people enough information about why and what it is and how it works, people must just not feel that it creates threat and that it creates difficulty and too much disruption for them. So, you just have to educate and the best way to educate is to make it visible and consistent.”*

Participant 4: *“For future candidates, it starts at school. Curriculums that are implemented and created give different perspectives with regards to let’s say coding. Give them more exposure to subjects than compared to your normal subjects. If I look at today, we haven’t received coding and stuff so the only way we would have known about coding and technology is if we go externally and do short courses in order to upskill ourselves.”*

Participant 7: *“I think create awareness about AI, it’s a mind shift change so letting them understand what artificial intelligence is. If I look at it from an HR department so just explain that it’s not like a robot trying to steal their job its more of technology trying to enable you to be more efficient in terms of your time. If you do a mindset or awareness change, let the HR professional know that their time is valuable, and we need to focus on other areas. And the same with the candidates make them understand how efficient is going to be for them so that they can now apply for a million roles and be more out there and have more potential in terms of opportunities....Awareness and marketing of understanding it. I think as humans we become anxious so taking this away. Also, the not knowing what it’s going to be about. i.e am I going to be on the phone, am I not going to have an interaction with others.”*

4.3.8 Impact of COVID 19 on the recruitment and selection process

An important factor to note and theme that emerged from the results was the impact of the COVID-19 pandemic on recruitment and selection processes. The COVID-19 global pandemic has changed the way in which people do things and how they interact with others. With various regulations imparted on individuals and organisations, normal operations had to be adjusted and adapted. One of the biggest adjustments and changes of the pandemic on recruitment and selection processes was the transition to virtual platforms and working remotely. For instance, in-person interviews no longer continued and had to move online using virtual platforms such as Zoom or WhatsApp. In addition, assessments also went from in-person to online assessments. A positive element was that technology aided these processes and made the transition to online smoother. Although it seemed easier and convenient in many ways where you could access it from various locations, a challenge that was presented was the possibility of poor internet coverage and candidates not fully educated on how to use these virtual platforms, as well as the possibility that the quality of candidates could be impacted. A downside of the pandemic on recruitment and selection processes was also the slowing down or halt of the filing of jobs due to the uncertainty around the pandemic. It is apparent from the above views that COVID-19 had implications on recruitment and selection practices, both positive and negative. However, technology played a pivotal role in lessening the impact of the pandemic in the working environment. A few of the above views are quoted below:

Participant 1: *“Since COVID 19 people have been more open to remote interactions and so locations is no longer limiting our talent pool for roles. Its positive as its one less aspect limiting getting the right applicant.”*

Participant 2: *“Yes, COVID has had an impact, we went from physically interviewing candidates where we met them face to face, but now everything is done virtually where you see the candidate on the screen once or twice and do the assessment you contact them via email/ call and then you employ them without having to actually physically see them. I’m not sure if it’s had an impact on the calibre of candidates employed through having virtual interviews only its maybe too soon to tell.”*

Participant 3: *“COVID 19 has changed the way in which we interact with our candidates, how we source them, how we interviewed them, how we selected and appointed them,*

even how we onboarded them. The implication of this is that we need to ensure that it creates fairness in the recruitment process because the challenge is if somebody has terrible bandwidth on a zoom call, they can actually create an impression that was outside of their control. The same thing with psychometrics, when somebody is not briefed correctly, with regards to a psychometric assessment their ability to perform their best also has an implication. So, the thing about what COVID 19 has done is that it has introduced more technological platforms into the recruitment and selection process.”

Participant 4: “...the first interview would be done telephonically, and the second would be done face to face. Some still do it face to face, but for instance one of the regional ops managers would do a video call for the second round of interviews.”

Participant 5: “Yes, more so now with COVID 19 and virtual interviews”

Participant 6: “So yes, definitely it has had an impact on our current recruitment and selection process right now things are going extremely slow as we are not able to recruit as many candidates as we want because certain vacancies would have to close because of the pandemic... It is difficult now because now you have to interview the person via Zoom and if the candidate doesn't have access to zoom so now you have to create them a profile so that they can have access so now you still have to find out if the candidate is comfortable with Zoom because remember if we are going to create you a profile you now first need to figure it out. It's not rocket science but like I said candidates are lazy so they will now figure it out 5 minutes before the interview. If zoom doesn't work we are very flexible so we will do a WhatsApp call but with that its very dangerous because now candidates have your personal cell phone number and now your WhatsApp and emails are going off, and if you not getting back to the candidate they can see that you are online.”

Participant 7: “Yes, when the pandemic happened all roles were put on hold, we had to remove vacancies from the portal and adverts. when it initially started, we were not allowed to do interviews face to face, but now we can a bit due to the masks.”

Participant 9: “Interviews are taking place online or via zoom, so it definitely has had an impact on recruitment and selection. ...Yes, all our assessments were online because we

are so scattered, and our head office is in Sandton so for cost efficiency everyone is so over its not just in SA but also the rest of Africa. When it comes to psychometric assessments it's easier to do it online.”

4.4 SUMMARY OVERVIEW OF THE FINDINGS

In summary, the HR professionals provided a solid understanding of Artificial Intelligence, associating it with technology, systems, and tools capable of performing tasks generally done by humans. They also recognise AI's impact in optimising and automating HR practices such as CV screening and making processes much faster and more efficient. However, there was concern raised about the potential loss of the human factor in AI-driven processes, acknowledging the unique element that humans bring to the recruitment and selection space, which technology may not necessarily be able to replicate.

Next, HR professionals highlight efficiency and time management as benefits of AI in the recruitment and selection space. Efficiency as a perceived benefit of AI describes its ability to eliminate paperwork and repetitive tasks such as sifting through large volumes of CVs at a more accurate and quicker rate whilst selecting the best candidate at the same time. Time management as a perceived benefit of AI describes its ability to save time across various recruitment and selection processes, such as screening, shortlisting, calculations, and filling positions. This increased speed allows HR professionals to focus on more significant and strategic tasks, enhancing response times and improving the overall candidate experience.

The HR professionals also highlight a few risks associated with AI in recruitment and selection, such as the absence of physical and human interaction, which can lead to potential issues such as dependence on AI for accuracy and the possibility of missing certain nuances that AI may not necessarily be able to pick up such as culture/person fit. In addition, HR professionals also highlighted the general risk of system/technical failures. They emphasised that the effectiveness of AI within the recruitment and selection process depends on its proper use and control by humans.

Furthermore, generational differences and access to technology and resources are described as factors influencing candidates' readiness for AI adoption in recruitment and selection. The findings mention that younger individuals may be more enthusiastic about new technologies

compared to older generations, with education playing a role in bridging this gap. Access to technology and resources is a significant factor, particularly in socio-economic contexts like South Africa, where disadvantaged candidates may lack access to the necessary tools and knowledge to utilise AI-powered technologies within the recruitment space.

Lastly, the findings further describe the high costs associated with AI technologies and the lack of education and awareness about AI as being some of the factors contributing towards the resistance to AI adoption in HR within South African companies. The HR professionals highlighted training and development, change management and education and awareness initiatives as some of the factors to increase AI preparedness and adoption.

4.5 CHAPTER SUMMARY

This chapter presented the findings and themes that have emerged from the data collected from the interviews. The themes were organised and linked to the research objectives as delineated at the beginning of this chapter. The demographical details of the participants and chosen sample were described in this chapter. The themes and sub-themes were identified along with the respective quotes from the participants provided as evidence to support the themes. The data from findings provide insight into the perceptions of HR professionals on the impact of Artificial Intelligence in recruitment and selection practices. The following chapter will discuss the research findings of this study along with other literature, possible limitations of the study and provide recommendations.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

This chapter discusses the findings of the research study in relation to the current research objectives. It discusses the research of other authors in relation to the research objectives and findings. The purpose of this chapter is to draw meaningful insights from the qualitative information presented in Chapter 4 of this study as well as the literature reviewed in Chapter 2. The overall objective of the current study is to investigate the perceived impact of Artificial Intelligence on the recruitment and selection practices of HR professionals working within the retail sector in the Western Cape. The discussion will be presented in terms of the research objectives with integration from sources of literature collected. The first section highlights HR professionals' perception of AI in recruitment and selection. The second section explores the impact of AI on recruitment and selection practices. The third section determines the perceived level of preparedness and adoption on the use of AI in Recruitment and Selection. In contrast, the fourth section explores what can be done to prepare employees and candidates for the use of AI in recruitment and selection. Lastly, this chapter will then provide possible limitations of the study and recommendations for future research.

5.2 INTERPRETATION AND DISCUSSION OF RESEARCH FINDINGS

5.2.1 HR Professionals' perception of AI in recruitment and selection

In terms of the HR professionals' understanding and perception of Artificial Intelligence, the findings present an association with technology and systems as well as optimisation, automation and the lack of human interaction when using AI technologies within recruitment and selection. The experiences of using AI have either been in a professional capacity through their roles within the HR space or in a personal capacity using a cellphone. Kurzweil (1990) defines AI as the art of constructing machines that can perform functions which command intelligence when performed by humans (as cited by Jain, 2017). With the use of technology and systems, HR professionals held the view that AI can perform various functions and tasks that are normally performed by humans and is generally used to provide support and assistance to make their lives easier. For instance, one of the biggest buy-ins for AI in the recruitment and selection space is the optimisation and automation of certain tasks and processes that allow activities to be done effectively and more efficiently. Examples include simple tasks that are purely administrative and repetitive in nature that can be done through automation, such as

sifting through CV's. This is aligned with the views of Christopher (2019), who states that HR professionals are directing their efforts towards optimising their work in order to achieve a simpler and more efficient work environment through the combination of human effort and automation. In addition, findings highlighted the use of AI-powered tools via a mobile phone for gaming and voice-powered assistants, as well as the use of chatbots where one can interact with this tool without (or limited) human interaction. Schoeman (2017) and Lange (2023) refer to AI-powered technologies such as virtual agents (i.e. chatbots) and speech analytics (software that recognises patterns in speech). According to Lange (2023), a chatbot is an AI-powered tool that can be used to simulate human conversation. The author further elaborates that there are two main types of chatbots: one that is rule-based and good at answering straightforward, predefined questions (i.e. FAQs), one that is more advanced and uses natural language processing and machine learning to understand and respond to questions in a more human-like manner.

It is apparent that AI is able to perform various tasks and processes normally associated with human abilities; however, the findings also emphasised the view that AI takes away the humanised elements (particularly in the recruitment and selection space) that technology may not be able to produce. Oswal et al. (2020) support this notion by adding that human qualities are irreplaceable, such as emotional understanding, empathy and intuitiveness. Therefore, although AI-powered technologies in recruitment and selection could provide the needed assistance and support to HR professionals in reducing certain tasks, emotions are a factor that separates man from technology. The findings revealed that there is still a need for engagements and soft touches for discerning whether a person is the right fit for the job and organisation. This is supported by Rajesh et al. (2018), who states that the automated screening process may not be able to identify the softer skills where there is a lack of human judgement capabilities and even cultural fit aspects. In addition, AI processes and automated responses may also be seen as too impersonal, especially for people who prefer engagement and interaction. According to Oswal et al. (2020), candidates do not prefer to talk to machines during the whole recruitment and selection process and therefore, human interaction still holds an essential place in the initial stages of the recruitment process.

5.2.2 Impact of AI on recruitment and selection practices

This section discusses the perceived impact of AI on recruitment and selection practices. The findings highlighted the impact of Artificial Intelligence within certain areas in the recruitment and selection space. In addition, the findings also presented both positive and negative

implications of Artificial Intelligence within recruitment and selection. This section will also provide an account of the impact of COVID-19 on recruitment and selection practices. Firstly, recruitment and selection can be described as the process of recruiting, screening, shortlisting and selecting the individuals that make up the organisation's workforce. One of the main implications of AI on the recruitment and selection processes, as highlighted in the findings, is the automation of the screening and shortlisting of applications and CVs. The HR professionals refer to the tedious nature of having to go through a large number of applications and CVs; however, the use of automation reduces the burden on them having to do it manually. In essence, once the job is posted on the career portal (either on the organisation's website or various platforms such as Indeed, PNET or LinkedIn, etc.). According to Hunkenschroer and Kriebitz (2023), algorithms are used to filter and screen all the applications and CVs based on the criteria provided.

This process can be managed by a tool such as an applicant tracking system. The findings refer to the use of tools such as an applicant tracking system to track and screen the candidates' job applications and CVs, which is an automated process and is linked to the various careers portal where the candidates submit their documents. Several authors (Flesher, 2016; Gusdorf, 2019; Kufilinski, 2018) refer to the use of an automated system, such as an ATS, that is able to screen and scan the online submissions of the applications. Gusdorf (2019) also states that these automated systems have the ability to scan applications and CVs for certain keywords, which ultimately saves HR professionals time in the process.

As per the themes highlighted in Chapter 4, efficiency and time management were identified as some of the positive aspects and implications of the use of AI in recruitment and selection. The HR professionals expressed a positive perception of AI, such as its role in improving efficiency by speeding up and streamlining processes, particularly with the screening of applications. The screening process is a pivotal step as it eliminates candidates who do not meet the minimum requirements of the job. As mentioned before, if this process is done ineffectively, it could lead to the organisation losing out on highly talented candidates or even hiring the wrong person. Furthermore, HR professionals deemed time management as a positive when using AI tools in tasks such as screening, shortlisting, performing calculations correctly and faster, and even filling critical positions. According to Rajesh et al. (2018) and Ideal (2020), AI-powered technology has the capability to enhance HR's efficiency by screening the greatest number of applicants in the shortest amount of time. It can speed up parts of the recruiting process through automation whilst reducing the time to hire.

HR professionals also indicated some of the negative implications and risks associated with the use of AI. As mentioned above in the previous section, AI removes human interaction during the HR process, thus having to place your trust in AI to produce accurate results. However, if there is a bug in the code, this could lead to inaccuracy. The findings further report that technical and system issues pose a risk in using AI in recruitment and selection. If the system is not programmed correctly, it may not produce the intended results and could be detrimental to the recruitment and selection process as you may lose quality candidates. According to the website Sonovate (2023), a pitfall of using AI in recruitment is its unreliable nature, as AI algorithms are based on the data it is trained on. Hence, if the data is outdated or inaccurate, this may lead to unreliable AI predictions. In addition, due to the complexity associated with AI, it can be prone to technical issues such as system failures and bugs. Thus, it is important to ensure that robust recovery and backup systems are in place (Sonovate, 2023). This is supported by the views of Buchanan (2018), who states that no technology is 100% without fault, adding that it should never completely replace the human touch.

5.2.3 Impact of COVID 19 on recruitment and selection

The COVID-19 pandemic resulted in many changes to the working environment and, particularly, to employees. For instance, social distancing regulations meant that the traditional way of doing things had to be adapted. According to Al-Alawi et al. (2023), HR departments played a significant role in managing and leading employees in this challenging time by easing their concerns and uncertainty through the development and implementation of new strategies. This is supported by the responses from HR professionals indicating the change to their traditional way of working as a result of the COVID-19 pandemic. The role of the COVID-19 pandemic in the use of technology has enabled digitalisation throughout the organisation's business practices. The authors Bloomberg (2018) and Brennen & Kreiss (2016) describe digitisation as the technical process of transforming the traditional paper-based and analogue processes to a digital format where computers provide aid in accessing, storing and transmitting data (as cited in Amankwah-Amoah et al., 2021). Amankwah-Amoah et al. (2021) further state that digital technologies such as smartphones, websites, social media, automation technology, and robotics (amongst others) have helped pave the way for innovation and engagement; however, businesses have not realised the full potential of digitisation with the COVID-19 pandemic being a driving force for the adoption of emerging technologies.

The pandemic had changed the way people interacted with each other and essentially fast-tracked the use of technology to aid operations within organisations. Al-Alawi et al. (2023)

emphasise the use of technology specifically within HR and highlight the need for digital transformation of HR practices within businesses. According to Carnevale & Hatek (2020), the pandemic changed the working conditions for new and existing employees through the transition to remote working environments, as well as the introduction of workplace policies that reduce the need for human contact. This aligns with what HR professionals have indicated, as certain recruitment and selection practices shifted to virtual platforms and remote working. For example, the research findings indicated that due to the COVID-19 regulations, in-person interviews were no longer feasible, and HR professionals had to shift to virtual platforms like Zoom or WhatsApp to conduct interviews. Similarly, assessments that were previously conducted in person were replaced with online assessments. These perspectives confirm the assertion made by Drapeau (2020), who emphasises that organisations are using more online platforms such as Zoom or MS Teams as a medium for communication for employees. It is also important to note that while technology played a pivotal role in aiding these processes and making the transition to online much smoother and more convenient, findings also reported the technical challenges for the candidates. These include the lack of digital skills on how to use these platforms or even just having access to a stable internet connection and data. According to Malinga (2020), the distressing impact of the COVID-19 pandemic has emphasised the state of ICT in South Africa. It has created the need for the various sectors and industries to accelerate the shift towards digitalisation. The author also highlighted the digital divide experienced by individuals as a result of this.

In summary, the above discusses some of the perceived implications of AI on recruitment and selection, as well as the implications of the COVID-19 pandemic, in conjunction with the views of other sources of literature. Overall, the impact of AI on recruitment and selection was perceived to be mostly beneficial, particularly in the screening stage of the process and the automation of simple tasks that allow for efficiency and time management. The negative was the lack of human factors in the process and the implications around this. Lastly, it was evident that the COVID-19 pandemic had an impact on the traditional way of working for HR professionals and that technology played a pivotal role in bridging the gap.

5.2.4 Preparedness and adoption of the use AI in recruitment and selection

This section discusses the perceived level of preparedness and adoption for the use of AI within recruitment and selection processes and the factors impacting this. The findings presented conflicting and mixed perspectives around the perceived level of preparedness for South African candidates for the use of AI within recruitment and selection processes. The main

factors impacting AI adoption and readiness from the perspectives of HR professionals are the generational differences of applicants and the access to technology and resources affecting their readiness. Some of the HR professionals held the view that the younger generation might be more excited about the introduction of new technologies as opposed to the older generations. Mcquater (2017) highlighted the generational gap in the use and perceptions of AI, with the older generation (aged 55 and over) preferring human interaction over AI interaction when compared to younger consumers. A survey conducted by a software company called ABBYY reports that millennials are keen to delegate tasks such as human interaction. In contrast, the older generation is not as willing to forgo these tasks to robots (as cited by Bean, 2018). The findings also echo Bean's (2018) view that educating individuals on how to use the technology will help AI adoption.

Given South Africa's socio-economic conditions, it is not surprising that there are still individuals who are impacted by the lack of access to the needed technology and resources when applying for a job. Munyoka (2022) asserts that factors such as the high level of digital divide, abject poverty, high costs of internet bandwidth and the ICT skills deficits pose an alarming challenge to the efforts to minimise inequalities of technological advancements in Africa. This is supported by the views of the HR professionals who assert that some South African candidates who are disadvantaged may not have access to the resources (i.e., computer, email, internet) to enable them to utilise AI or even participate in the recruitment and selection process. In addition, individuals may also not know how to use these platforms. Findings also noted the access to technology that hinders many South Africans from AI adoption, particularly within South Africa, which is a third-world country where technological advancement might not be considered a priority given the socio-economic status of many citizens.

Another aspect the study sought to explore is the perceived resistance to AI adoption in human resources within companies in South Africa. The findings highlight the emergence of two factors contributing to AI resistance: the perceived high costs associated with AI technology and the lack of education and awareness about AI. A general connotation from the HR professionals is the high costs associated with the implementation of AI-powered technologies within organisations, with the financial burden hindering companies in SA from using AI within its HR operations. Several authors (Ernst & Young, 2018; Rathi, 2018) refer to the financial implications as a deterrent when it comes to the implementation and integration of AI tools used to assist HR with administrative tasks. The implementation of AI systems is also dependent on the size of the organisation and whether its implementation is financially feasible.

For instance, larger companies may have more financial resources to invest in AI technologies for recruitment and selection, which could help facilitate adoption rates. On the other hand, smaller businesses may be more cautious with their finances because of fiscal restraints, hence reducing the need for advanced technologies such as AI.

Lastly, another factor contributing to the resistance to AI adoption is the lack of awareness and unfamiliarity with AI. The lack of awareness and unfamiliarity brings about feelings of fear and anxiety about the possibility of AI taking over people's jobs and job loss because of this. This echoes the sentiment of other authors (Goasduff, 2019; Marr, 2019), who assert that fears and uncertainty from individuals, whether for fear of job loss due to AI or the fears of the unknown, can lead to resistance to implementation. People are reluctant to embrace new technology because they lack knowledge about it. Education and a mindset shift play a significant role in creating awareness about the value of AI to South African businesses but also allow others to see its benefits.

In summary, the above discusses the perceived level of preparedness and adoption for the use of AI within recruitment and selection processes from the findings of the study in conjunction with the literature sourced. Findings highlighted factors such as generational influences and access to technology and resources within SA. In addition, the findings also presented the perceived level of AI resistance, which included the high costs associated with AI implementation and the lack of awareness and familiarity with AI being a barrier to AI adoption.

5.2.5 Measures to prepare employees and candidates for the use of AI in recruitment and selection

This study sought to explore the various measures to prepare employees and candidates for the use of AI in recruitment and selection. The findings and themes that emerged from the data are the need for training and development, change management and education and awareness to increase AI preparedness and adoption. Firstly, one of the measures to prepare others for the integration of AI in the recruitment and selection processes is training and development. The findings from the HR professionals reported that when implementing new technologies such as AI, training and development initiatives should be rolled out within the organisation to upskill staff on the use of these systems. This will help prepare them for how the system will work and may increase adoption rates. A training needs analysis could be a helpful tool to determine the skills that exist internally as well as the skills needed to build AI capabilities. According to Tinholt et al. (2018), in order to transform the organisation in such a way that it

can leverage new opportunities presented by AI, there has to be a shift in the organisation's capabilities. Deloitte (2020) asserts that organisations have to embrace a culture of lifelong learning by investing in constant upskilling of the workforce to bridge the gap between existing pockets of AI expertise. The findings refer to the use of electronic learning or online learning as a medium for training initiatives, which is supported by Deloitte (2020), stating that electronic learning (e-learning) platforms provide technical learning that can easily integrate into the employee's day. The author further adds the availability of courses on a range of subjects, such as machine learning and data visualisation. By investing in ongoing training, development, and upskilling initiatives can ensure that HR staff are not only skilled in using AI technologies but also able to leverage its capabilities to enhance the organisation's recruitment and selection processes. For future candidates, some HR professionals indicate that the organisation provides access to training for the candidates, whether online, on the company website or providing transportation for those who do not have access to it. Alternatively, the organisation could also make a space available for candidates who may not have access to laptops or the Internet to do their screening.

Another measure to prepare employees and candidates for the use of AI in recruitment and selection, as indicated by HR professionals, is change management. The findings report that a lot of change management is needed to prepare the organisation for the change and get the employees to change to a different way of doing things, with communication as key to sharing the news of such changes. Hmoud (2021) explains that HRM plays a significant role as the change agent in promoting change management through encouraging an agile culture that copes with changes such as innovation and technology, strengthening organisational capacity for change, and lastly, providing daily operational support to managers and employees. According to Snyder-Halpern (2001) and Weiner (2009), the organisational readiness for change suggests that a higher level of organisational readiness will increase the success of innovation adoption and subsequently decrease the risk of failure (as cited in Jöhnk et al., 2021). Therefore, by adopting change management principles, the organisation can effectively create awareness about the need for change (such as the implementation of AI in recruitment and selection processes) and communicate these changes throughout the organisation to clarify the benefits as well as address certain concerns causing resistance from the employees.

Lastly, another key measure to prepare employees and candidates that emerged from the findings is education and awareness. Concerns were previously raised about the use of AI in recruitment and selection, with the lack of understanding and familiarity causing uncertainty

and fear. HR professionals and organisational leaders need to be clear on the value and need for AI within their processes. Guenole & Feinzig (2018) state that organisations need to understand the business problem they intend to solve with AI, which can be resolved with better insights, data and information. When organisations are clear about their intention of using advanced technologies, they can alleviate some of the fears and uncertainty about its use, particularly with technologies such as AI, where people have fears that automation might replace their jobs. The findings report that by providing knowledge and information to internal employees and candidates on the use of AI may help with a mindset shift about AI, prepare them for how the system works, and alleviate any anxiety and fears around the new system. For future candidates, the school curriculum could be adapted to include subjects such as coding. This could lead to an increase in digital skills relevant to the future.

In summary, the above explores the various measures to prepare employees and candidates for the use of AI in recruitment and selection. This consists of training and development, change management, and lastly, education and awareness.

5.3 LIMITATIONS OF THIS STUDY

One of the primary limitations of the current research could be the small sample size, which could potentially limit the generalisability of the findings. While it is true that the level of data saturation was reached with the sample size, it is important to keep in mind that the goal of the current research study was to collect rich descriptive information from diverse participants who met the criteria of the sample. Despite this limitation, the findings still provide valuable insights and recommendations for HR professionals looking to foster education and awareness around AI technologies in the workplace.

Another limitation of the current study, given the nature and complexity of a topic such as Artificial Intelligence in recruitment and selection, is that there may be variations in the participants' understanding and experience with the topic. In addition, as mentioned in Chapter 1 of this research, the researcher acknowledged that she is not an expert on the topic of Artificial Intelligence. With the field of Artificial Intelligence being extremely complex to laymen, this research and study is based on the general and intelligible application of AI in recruitment and selection.

Next, a limitation of this study is that the sample was limited to HR professionals working within the retail sector. Thus, the findings cannot be generalised to all working HR professionals.

Lastly, the field of AI in recruitment and selection is rapidly changing with new developments, and the findings of the current study may not be the most current.

5.4 RECOMMENDATIONS

5.4.1 Recommendations For HR Professionals

In order to bridge potential digital skills gaps that may exist within organisations, HR professionals should consider performing a skills audit and training needs analysis to close these gaps. Muller-Heyndyk (2023) suggests that a digital skills assessment serves as the crucial step in ensuring that digital transformation aligns with the organisation's goals, allowing those who do it successfully to prevent costly errors and obtain valuable insights into their business and culture. When introducing advanced and modern technologies such as AI, it is important to understand the level of digital literacy that exists within the organisation so that staff needs can be catered for, and development areas can be addressed.

Furthermore, another recommendation is to invest in a culture of employee upskilling and continuous development. This is especially important in light of the constantly evolving landscape of AI technologies that may impact certain job roles and requirements. It is, therefore, necessary for HR professionals to remain abreast of current trends and technologies and tailor their training programmes accordingly. When the organisation fosters a culture of development and support, it can help employees adapt more quickly as they are already accustomed to a learning environment.

Lastly, in light of anxieties and concerns regarding AI technologies, ranging from apprehensions about 'robots' dominating our lives to the potential for job loss as AI may render certain roles redundant, fostering education and awareness becomes essential in addressing employees' apprehensions. The findings from the study support this as it highlights the lack of awareness and unfamiliarity with AI being one of the perceived factors hindering AI adoption. Therefore, a recommendation for HR professionals is to create awareness and educate staff about the value of modern technologies such as AI in order to get buy-in. A practical change management tool is the Prosci ADKAR Model. According to Sulistiyani et al. (2020), the ADKAR model is able to identify the reasons why changes are made and assist with determining the process and steps needed to make the change successful.

5.4.2 Recommendations for future research

The future research of AI in recruitment and selection can benefit from several recommendations. The first suggestion is to increase the sample size and incorporate

quantitative data to support the qualitative views. This can lead to more generalisable findings for the population. Another recommendation is to include IT or IS professionals to facilitate the integration and link between HR and technology. Furthermore, expanding the sample to include participants from other sectors can provide more comprehensive insights into the implications of AI in different industries. Lastly, it is important to consider the impact of AI technologies on the candidate experience during the recruitment and selection process.

5.5 CONCLUSION

This study investigated the perceived impact of Artificial Intelligence on recruitment and selection practices of HR professionals within the retail sector in the Western Cape. This was done by reviewing sources of literature that provided insights into what Artificial Intelligence is, the functions of HR that may be influenced by AI, and the future world of work. For the purposes of this study, the focus was solely on recruitment and selection practices.

The themes of the study highlighted the HR professionals' perceptions and experiences with AI, the perceived benefits and risks associated with the use of AI in recruitment and selection, factors impacting AI adoption and resistance, as well as measures for organisations to prepare future and current staff for AI use within the recruitment and selection space.

Based on the findings of the study and reviewed literature, advanced technology such as AI has certain implications for HR professionals who work in the HR (i.e., recruitment and selection) space. These implications come with their advantages and disadvantages, and it is the organisation's responsibility to be aware of how the introduction of new technologies impacts not only their employees but also future employees coming into the organisation. Organisations need to educate and develop staff to be able to work alongside advanced technologies such as AI and automation in order to lessen the impact but also provide employees with the resources and skills to bridge digital gaps that may exist.

The findings also discussed the impact of the global pandemic on HR professionals and organisations. Based on the findings and sources of literature, the global pandemic has expedited organisations into the digital age, where technology played a pivotal role in facilitating HR to be able to leverage technology and social applications to perform the functions of their job.

Furthermore, several recommendations were made for HR professionals working alongside automation and AI technology, as well as for future research on the current topic.

In conclusion, advanced technology such as AI is transforming and modifying the recruitment and selection landscape. Its ability to automate and optimise tasks and processes and produce results in a faster and more efficient manner has the potential to transform the way in which organisations/ HR departments recruit and select staff. Although AI is intended to enhance and simplify certain processes, the human element still plays an integral part in the recruitment and selection process.



REFERENCES

- Akaranga, S. I., & Makau, B. K. (2016). Ethical Considerations and their Applications to research: A Case of the University of Nairobi. *Journal of Educational Policy and Entrepreneurial research*, 3(12), 1–9.
- Al-Alawi, A. I., Messaadia, M., Mehrotra, A., Sanosi, So. K., Elias, H., & Althawadi, A. H. (2023). Digital transformation adoption in human resources management during COVID-19. *Arab Gulf Journal of Scientific Research*. <https://doi.org/10.1108/AGJSR-05-2022-0069>
- Alaruri, T. (2023). *Tools to help HR teams thrive amidst uncertainty*. <https://www.spiceworks.com/hr/hr-strategy/guest-article/tools-for-help-hr-teams/>
- Amankwah-Amoah, J., Khan, Z., Wood, G., & Knight, G. (2021). COVID-19 and digitalization: The great acceleration. *Journal of Business Research*, 136, 602–611. <https://doi.org/10.1016/j.jbusres.2021.08.011>
- Bailie, I. (2019). *What is AI and how is it impacting recruitment?* . <https://www.myhrfuture.com/>
- Bean, S. (2018). *Generations divide on the role of Artificial Intelligence in the workplace*. <https://workplaceinsight.net/generations-divide-on-the-role-of-artificial-intelligence-in-the-workplace/>
- Becker, L., Bailey, M., & Scroggins, A. (2018). *Is AI Above the Curve in Evaluating Employee Performance?* <https://www.lexology.com/library/detail.aspx?g=935e7736-dc4e-422c-b91d-7396b1a34004>
- Bhardwaj, R. (2019). *How AI is Revolutionizing the Human Resource Functions*. Entrepreneur. <https://www.entrepreneur.com/article/325715>
- Bhat, A. (n.d.). *Questionnaires: The ultimate guide, advantages & examples*. <https://www.questionpro.com/blog/what-is-a-questionnaire/>
- Biswas, S. (2019). *The Beginner's Guide to AI in HR*. HRtechnologist. <https://www.hrtechnologist.com/articles/digital-transformation/the-beginners-guide-to-ai-in-hr/>

- Black, S. J., & Van Esch, P. (2020). AI-enabled recruiting: What is it and how should a manager use it? *Business horizons*, 63(2), 215-226.
<https://www.sciencedirect.com/science/article/pii/S0007681319301612>
- Blumberg, B., Cooper, D., & Schindler, P. (2011). *Business Research Methods* (4th ed.). McGraw-Hill Higher Education.
- Bolden-Barrett, V. (2017). *CareerBuilder: Over half of HR managers predict AI will be part of their function in 5 years*. <https://www.hrdiver.com/news/careerbuilder-over-half-of-hr-managers-predict-ai-will-be-part-of-their-fu/443035/>
- Bryman, A. (2012). *Social Research Methods* (4 ed.). Oxford University Press.
- Buchanan, M. (2018). *The Risks and Rewards of AI in recruiting*. The McQuaig Institute.
<http://www.mcquaig.com/ai-recruiting>
- Carnevale, J. B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183–187. <https://doi.org/10.1016/j.jbusres.2020.05.037>
- Christopher, A. (2019). *Use of Artificial Intelligence in Human Resource Management*. <https://medium.com/@albertchristopherr/use-of-artificial-intelligence-in-human-resource-management-ddb4e4de9c6e>
- Chu, R. (2018). *What is AI? A Brief Explanation for layman*. <https://medium.com/datadriveninvestor/what-is-ai-a-brief-explanation-for-layman-f79f368702ea>
- Cln, L. I. S. (2013). Data collection techniques a guide for researchers in humanities and education. *International Research Journal of Computer Science and Information Systems*, 2(3), 40–44.
- Creswell, J. (2014). *Research design: qualitative, quantitative, and mixed methods approaches* (4 ed.). SAGE Publications.
- Deloitte. (2018). *The Fourth Industrial Revolution is here- are you ready?* Deloitte Insights.
https://www2.deloitte.com/content/dam/Deloitte/tr/Documents/manufacturing/Industry4-0_Are-you-ready_Report.pdf

- De Pasquale, S. (2018). *AI, robotics, automation: The fourth industrial revolution is here*. <https://phys.org/news/2018-12-ai-robotics-automation-fourth-industrial.html>
- Drapeau, D. (2020). *The Impact of COVID-19 on the Future of Technology*. Blue Fountain Media. <https://www.bluefountainmedia.com/blog/impact-covid-19-future-technology>
- Drum, K. (2017). *The AI Revolution Is Coming—And It Will Take Your Job Sooner Than You Think*. <https://www.motherjones.com/kevin-drum/2017/10/you-will-lose-your-job-to-a-robot-and-sooner-than-you-think-2/>
- Ernst & Young. (2018). *The new age: Artificial intelligence for human resource opportunities and functions*. Ernst & Young LLP. [https://www.ey.com/Publication/vwLUAssets/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions/\\$FILE/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions.pdf](https://www.ey.com/Publication/vwLUAssets/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions/$FILE/EY-the-new-age-artificial-intelligence-for-human-resource-opportunities-and-functions.pdf)
- Feloni, R. (2017). *Consumer-goods giant Unilever has been hiring employees using brain games and artificial intelligence — and it's a huge success*. Business Insider. <https://www.businessinsider.com/unilever-artificial-intelligence-hiring-process-2017-6?IR=T>
- Flesher, R. (2016). *The Evolution of the Applicant Tracking System*. <https://thrivetrm.com/evolution-applicant-tracking-system/>
- Folick, O. (2019). *How AI Can Stop Unconscious Bias In Recruiting*. <https://ideal.com/unconscious-bias/>
- Forbes Coaches Council. (2018). *How will artificial intelligence change the future of hiring and recruiting*. <https://www.forbes.com/sites/forbescoachescouncil/2018/02/23/how-will-artificial-intelligence-change-the-future-of-hiring-and-recruiting/#2acdd7c95187>
- Fouka, G., & Mantzorou, M. (2011). What are the Major Ethical Issues in Conducting Research? Is there a Conflict between the Research Ethics and the Nature of Nursing? *Health Science Journal*, 5(1), 3–14.
- Frank, H. B. (2018). *Textio expands its AI to help humans craft better recruiting messages*. Venturebeat. <https://venturebeat.com/2018/04/02/textio-expands-its-ai-to-help-humans-craft-better-recruiting-messages/>

- Ganesan, K. (2019). *Gamification in Recruitment: Raising the bar of hiring, one level up*. People matters. <https://www.peoplesmatters.in/article/recruitment/gamification-in-recruitment-raising-the-bar-of-hiring-one-level-up-21464>
- Geetha, R., & Bhanu, S. R. (2018). Recruitment through artificial intelligence: A conceptual study. *International Journal of Mechanical Engineering and Technology (IJMET)*, 9(7), 63–70.
- Global Business Outlook . (2018). *AI in Change Management process practices in 2018*. Global Business Outlook. <https://www.globalbusinessoutlook.com/ai-in-change-management/>
- Goasduff, L. (2019). *3 Barriers to AI Adoption*. Gartner. <https://www.gartner.com/smarterwithgartner/3-barriers-to-ai-adoption/>
- Guenole, N., & Feinzig, S. (2018). *The Business Case for AI in HR: With Insights and Tips on Getting Started*. IBM Corporation. <https://www.ibm.com/downloads/cas/AGKXJX6M>
- Gusdorf, M. L. (2009). *Recruitment and Selection: Hiring the Right Person*. Society for Human Resource Management. https://www.shrm.org/certification/for-organizations/academic-alignment/faculty-resources/Documents/09-0152%20Gusdorf_Instructor_Notes.pdf
- Harwell, D. (2019). *A face-scanning algorithm increasingly decides whether you deserve the job*. <https://www.washingtonpost.com/technology/2019/10/22/ai-hiring-face-scanning-algorithm-increasingly-decides-whether-you-deserve-job/>
- Hedley, N. (2018). *South African firms behind the curve in adopting emerging technologies*. Business live. <http://www.businesslive.co.za/bd/business-and-economy/2018-06-27-south-african-firms-behind-the-curve-in-adopting-emerging-technologies/>
- Hmoud, B. (2021). The adoption of artificial intelligence in Human Resource Management and the role of human resources. *Forum Scientiae Oeconomia*, 9(1), 63–70.
- Howell, D. (2019). *Digitising Human Capital: How AI is Transforming HR*. <https://www.silicon.co.uk/workspace/how-ai-is-transforming-hr-289935>

- Hunkenschroer, A. L., & Kriebitz, A. (2023). Is AI recruiting (un) ethical? A human rights perspective on the use of AI for hiring. *AI and Ethics*, 3(1), 199–213. <https://doi.org/10.1007/s43681-022-00166-4>
- Ideal. (2020). *AI for Recruiting*. Ideal. <https://ideal.com/ai-recruiting/>
- Islam, M. A., & Aldaihani, F. M. (2021). Justification for Adopting Qualitative Research Method, Research Approaches, Sampling Strategy, Sample Size, Interview Method, Saturation, and Data Analysis. *Journal of International Business and Management*, 5(1), 1–11. <https://doi.org/10.37227/JIBM-2021-09-1494>
- Jain, S. (2017). Is Artificial Intelligence The Next Big Thing In Hr? *International Conference on Innovative Research in Science, Technology and Management*. <http://data.conferenceworld.in/MIMT/P220-224.pdf>
- Jobvite. (2016). *What is the Difference between Recruitment and Talent Acquisition?* <http://www.jobvite.com/recruitment-process/what-is-the-difference-between-recruitment-and-talent-acquisition/>
- Jöhnk, J., Weißert, M., & Wyrтки, K. (2021). Ready or Not, AI Comes— An Interview Study of Organizational AI Readiness Factors. *Business & Information Systems Engineering*, 63(1), 5–20. <https://doi.org/10.1007/s12599-020-00676-7>
- Kabir, S. M. (2016). Methods for Data Collection. In *Basic Guidelines for Research: An Introductory Approach for All Disciplines* (1st ed.). Book Zone Publication.
- Kapur, R. (2018). *Recruitment and Selection*. https://www.researchgate.net/publication/323829919_Recruitment_and_Selection
- Kivunja, C., & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6(5), 26-41. <https://doi.org/10.5430/ijhe.v6n5p26>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124. <https://doi:10.1080/13814788.2017.1375092>
- Kuflinski, Y. (2018). *How AI is Revolutionizing Applicant Tracking and the Recruitment Process?* . HRtechnologist. <https://www.hrtechnologist.com/articles/recruitment-onboarding/how-ai-is-revolutionizing-applicant-tracking-and-the-recruitment-process/>

- Lamson, M. (2018). *The Role of AI in Learning and Development*.
<https://www.inc.com/melissa-lamson/the-role-of-ai-in-learning-development.html>
- Landreneau, K. J., & Creek, W. (2009). *Sampling strategies*.
<https://www.natco1.org/assets/1/6/SamplingStrategies.pdf>
- Lange, C. (2023). *Chatbots and Virtual Assistants: Revolutionizing the Customer Experience*.
<https://www.linkedin.com/pulse/chatbots-virtual-assistants-revolutionizing-customer-experience>
- Lau, F. (2017). Methods for Survey Studies. In *Handbook of eHealth Evaluation: An Evidence-based Approach*. <https://www.ncbi.nlm.nih.gov/books/NB>
- Mahembe, M. (2012). *The Psychosocial Experiences of Immigrant Learners at a Primary School in the Western Cape*. [Unpublished master's thesis]. University of Stellenbosch.
- Makaring, A. (2017). *3 ways Artificial Intelligence can transform HR industry in SA*. HR Pulse.
<http://www.hrpulse.co.za/editors-pick/235401-3-ways-artificial-intelligence-can-transform-hr-industry-in-sa>
- Malinga, S. (2020). *COVID-19 exposes SA's digital fractures, inequality*. ITWeb.
<https://www.itweb.co.za/content/dgp45qa6ENAvX9I8>
- Marr, B. (2019a). *The 4 Biggest Barriers To AI Adoption Every Business Needs To Tackle*. Forbes. <https://www.forbes.com/sites/bernardmarr/2019/02/25/the-4-biggest-barriers-to-ai-adoption-every-business-needs-to-tackle/#780025c02731>
- Marr, B. (2020b). *How The COVID-19 Pandemic Is Fast-Tracking Digital Transformation In Companies*. Forbes. <https://www.forbes.com/sites/bernardmarr/2020/03/17/how-the-covid-19-pandemic-is-fast-tracking-digital-transformation-in-companies/#62185569a8ee>
- Maurer, R. (2020). *Job Interviews Go Virtual in Response to COVID-19*. SHRM.
<https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/job-interviews-go-virtual-response-covid-19-coronavirus.aspx>
- May, R. (2016). *How Artificial Intelligence Impacts HR: Incorporating intelligent assistants in the workplace*.
https://www.hr.com/en/magazines/hr_strategy/august_2016_hr_strategy_planning/how-artificial-intelligence-impacts-hr-incorporati_is8sjn4q.html

- Mayer, K. (2020). *Why the pandemic isn't all bad for the workplace*. Human Resource Executive. <https://hrexecutive.com/why-the-pandemic-isnt-all-bad-for-the-workplace/>
- McGrady, V. (2017). *New Study: Artificial Intelligence Is Coming For Your Job, Millennials*. LinkedIn. <https://www.forbes.com/sites/vanessamcgrady/2017/06/09/millennial-jobs/#63b6d7e2530c>
- McGregor, S. (2019). *Understanding and Evaluating Research: A Critical Guide*. SAGE Publications, Inc. <https://dx.doi.org/10.4135/9781071802656>
- McKinsey. (2017). *Artificial Intelligence: The Next Digital Frontier?* McKinsey & Company. <https://www.mckinsey.com/~media/mckinsey/industries/advanced%20electronics/our%20insights/how%20artificial%20intelligence%20can%20deliver%20real%20value%20to%20companies/mgi-artificial-intelligence-discussion-paper.ashx>
- McLaren, S. (2018a). *9 Ways AI Will Reshape Recruiting (and How You Can Prepare)*. LinkedIn. <https://business.linkedin.com/talent-solutions/blog/future-of-recruiting/2018/9-ways-ai-will-reshape-recruiting-and-how-you-can-prepare>
- McLaren, S. (2018b). *How Hilton, Google, and More Have Dramatically Reduced Their Time to Hire*. LinkedIn. <https://business.linkedin.com/talent-solutions/blog/recruiting-strategy/2018/how-4-companies-reduced-time-to-hire>
- Mcquater, K. (2017). *Generational gap in perceptions of AI*. <https://www.research-live.com/article/news/generational-gap-in-perceptions-of-ai/id/5031632>
- Meister, J. (2020). *The Impact Of The Coronavirus On HR And The New Normal Of Work*. Forbes. <https://www.forbes.com/sites/jeannemeister/2020/03/31/the-impact-of-the-coronavirus-on-hr-and-the-new-normal-of-work/#13ca4cc52b60>
- Morikawa, M. (2017). *Assessing the impact of AI and robotics on job expectations using Japanese survey data*. <https://voxeu.org/article/who-fears-losing-their-job-ai-and-robots-japanese-survey-data>
- Muller-Heyndyk, R. (2023). *Known unknowns: how a digital skills audit can help transform your workforce*. <https://www.raconteur.net/talent-culture/how-digital-skills-audit-could-help-transform-workforce>

- Munyoka, W. (2022). Inclusive Digital Innovation in South Africa: Perspectives from Disadvantaged and Marginalized Communities. *Sustainability*, 14(9), 5372. <https://doi.org/10.3390/su14095372>
- Olmert, N. (2018). *The Use of Digital Recruitment Tools Is on the Rise. Here's What You Need to Know*. Entrepreneur. <https://www.entrepreneur.com/article/315294>
- O'Riordan, J. (2017). The Practice of Human Resource Management. *Institute Of Public Administration*.
https://www.ipa.ie/_fileUpload/Documents/THE_PRACTICE_OF_HRM.pdf
- Oswal, N., Khaleeli , M., & Alar, A. (2020). Recruitment in the era of industry 4.0: Use of Artificial Intelligence In Recruitment and its impact. *Palarch's Journal of Archaeology of Egypt/Egyptology*, 17(8), 39–47.
- Pennington, C. (2023). *Is unconscious bias compromising diversity and inclusion in the workplace?* <https://talenttalks.net/unconscious-bias/>
- Phillips, R., Seedat, Y., & Van der Westhuizen, S. (2018). *Creating South Africa's Future Workforce*. Accenture . https://www.accenture.com/t20180201T173907Z__w__/za-en/_acnmedia/PDF-70/Accenture-Creating-South-Africa-Future-Workforce.pdf?lang=en
- Polli, F. (2019). *Using AI to Eliminate Bias from Hiring*. Harvard Business Review. <https://hbr.org/2019/10/using-ai-to-eliminate-bias-from-hiring>
- Pribanic, E. (2018). *Future of AI in Corporate Training and Development*.
<https://www.techfunnel.com/hr-tech/future-of-ai-in-corporate-training-and-development/>
- Preston, V. (2009). Questionnaire Survey. *International Encyclopedia of Human Geography*, 46-52. <https://doi.org/10.1016/B978-008044910-4.00504-6>
- Prokopeak, M. (2018). *Roomba for Recruiting: Artificial Intelligence Takes on Talent Acquisition*.
<https://www.workforce.com/news/roomba-for-recruiting-artificial-intelligence-takes-on-talent-acquisition>
- PwC. (2017). *Artificial Intelligence in HR: a No-brainer*. PricewaterhouseCoopers. <https://www.pwc.nl/nl/assets/documents/artificial-intelligence-in-hr-a-no-brainer.pdf>

- Rajesh, S., Kandaswamy, M. U., & Rakesh, M. A. (2018). The impact of Artificial Intelligence in Talent Acquisition Lifecycle of organizations. *International Journal of Engineering Development and Research*, 6(2), 709–717.
- Rathi, R. (2018). Artificial intelligence and the future of hr practices. *International Journal of Applied Research*, 4(6), 113–116.
- Reeves, M. (2020). *Leading through the COVID Crisis: Frida Polli, CEO of pymetrics*. BCG Henderson Institute. <https://bcghendersoninstitute.com/leading-through-the-covid-crisis-frida-polli-ceo-of-pymetrics-5c361a742550>
- Reilly, P. (2018). *The impact of artificial intelligence on the HR function*. Institute for Employment Studies. <https://www.employment-studies.co.uk/system/files/resources/files/516-IES-Perspectives-on-HR-2018.pdf#page=45>
- Ryan, K. (2018). *Tesla and LinkedIn Think Resumes Are Overrated. They Use These Neuroscience-Based Games Instead*. <https://www.inc.com/kevin-j-ryan/pymetrics-replacing-resumes-with-brain-games.html>
- Sage. (2018). *The 10-step guide to building a compelling business case for an HR system*. The Sage Group. <https://www.sagepeople.com/wp-content/uploads/2019/02/Business-Case-Guide-SP19.pdf>
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research Methods for Business Students* (7th ed.). Pearson Education Limited.
- Schoeman, W., Moore, R., Seedat, Y., & Chen, J. (2017). *Artificial Intelligence: is South Africa Ready?* Accenture. <https://accenture.com/acnmedia/pdf-107/accenture-ai-south-africa-ready.pdf>
- Son, M., Lee, H., & Chang, H. (2019). Artificial Intelligence-Based Business Communication: Application for Recruitment and Selection. *Business Communication Research and Practice*, 2(2), 84–92. <https://doi.org/10.22682/bcrp.2019.2.2.84>
- Sonovate. (2023). *The benefits (and the downsides) of AI for the recruitment sector*. <https://www.sonovate.com/the-benefits-and-the-downsides-of-ai-for-the-recruitment-sector/>

- Sulistiyani, E., Ali, A. H. N., & Astuti, H. M. (2020). Change Management Strategies to Implement A Fingerprint Based Attendance System in Information Systems Department Using ADKAR Model. *Applied Technology and Computing Science Journal*, 3(1), 22–29. <https://doi.org/10.33086/atcsj.v3i1.1675>
- Summers, N. (2019). *The fourth industrial revolution could spark a wave of small business innovation in East Africa*. <https://africabusinesscommunities.com/tech/tech-features/column-nikki-summers-the-fourth-industrial-revolution-could-spark-a-wave-of-small-business-innovation-in-east-africa/>
- Taherdoost, H. (2022). What are Different Research Approaches? Comprehensive Review of Qualitative, Quantitative, and Mixed Method Research, Their Applications, Types, and Limitations. *Journal of Management Science & Engineering Research*, 5(1), 53–63. <https://doi.org/10.30564/jmser.v5i1.4538>
- Tarry, A. (2018). *The Role of HR in the 4th Industrial Revolution*. The HR Director. <https://www.thehrdirector.com/features/revolution/role-hr-industrial-revolution/>
- Tinholt, D., Van Niel, E., Van Kraaij, C., & Knodler, M. (2018). *Artificial Intelligence Benchmark*. Capgemini Consulting. <https://www.capgemini.com/wp-content/uploads/2018/07/AI-Readiness-Benchmark-POV.pdf>
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences*, 15(3), 398–405. <https://doi.org/10.1111/nhs.12048>
- Van Esch, P., Black, J. S., & Ferolie, J. (2019). Marketing AI recruitment: The next phase in the job application and selection. *Computers in Human Behavior*, 90, 215–222. <https://doi.org/10.1016/j.chb.2018.09.009>
- Vincent, J. (2018). *Amazon reportedly scraps internal AI recruiting tool that was biased against women*. <https://www.theverge.com/2018/10/10/17958784/ai-recruiting-tool-bias-amazon-report>
- Vonk, J. (2016). *Sampling*. https://www.jennifervonk.com/uploads/7/7/3/2/7732985/lecture_6_sampling.pdf

- Welman, C., Kruger, F. & Mitchell, B. (2005). *Research Methodology* (3rd ed.). Oxford University Press Southern Africa
- White-Klososky, A. (2020). *Integrating AI And HR — Where Do You Start?*. Forbes. <https://www.forbes.com/sites/cognitiveworld/2020/02/26/integrating-ai-and-hr---where-do-you-start/#7df982f36142>
- Wislow, E. (2017). *5 ways to use artificial intelligence (AI) in human resources*. <https://bigdata-madesimple.com/5-ways-to-use-artificial-intelligence-ai-in-human-resources/>
- Workfusion. (n.d). *Standard Bank Africa's largest bank transforms customer onboarding with automation*. <https://www.workfusion.com/customer-stories/standard-bank/>
- Wright, J., & Atkinson, D. (2019). *The impact of artificial intelligence within the recruitment industry: Defining a new way of recruiting*. <https://www.cfsearch.com/wp-content/uploads/2019/10/James-Wright-The-impact-of-artificial-intelligence-within-the-recruitment-industry-Defining-a-new-way-of-recruiting.pdf>
- Žukauskas, P., Vveinhardt, J., & Andriukaitienė, R. (2018). Philosophy and Paradigm of Scientific Research. In *Management Culture and Corporate Social Responsibility*. InTech. <https://doi.org/10.5772/intechopen.70628>

UNIVERSITY of the
WESTERN CAPE

APPENDIX A
Interview Guide

An investigation into the perceived impact of Artificial Intelligence on recruitment and Selection practices of HR professionals within the retail sector.

Participant information:

Age:

Gender:

Job title:

Years of experience in retail industry:

Education level:

Interview Guide:

1. What is your understanding of Artificial Intelligence?
2. Do you have any experience with using AI?
3. In your opinion, do you think there is a current need for AI in recruitment and selection practices?
4. How do you think HR can benefit from the use of AI?
5. Do you think there are risks involved with regards to the use of AI in recruitment and selection? Please elaborate.
6. What do you think are some of the factors hindering companies in SA from using AI within the HR?
7. What are the current systems and technologies that you have in place within your HR operations?
8. In your opinion, how prepared do you think potential candidates are for the use of AI within the recruitment and selection processes (from a South African context).
9. What measures can organisations and HR departments put in place to prepare its employees and future candidates for the use of AI within recruitment and selection?
10. Do you think organisations will be using AI in the future and what do you think about it??
11. Has COVID 19 had any impact on your current recruitment and selection practices and do you think there are any implications on the use of AI?