RESEARCH REPORT

RESEARCH STUDY TO INVESTIGATE THE FACTORS IMPEDING ATTAINMENT OF EQUITY TARGETS WITH RESPECT TO PEOPLE WITH DISABILITIES IN THE MINING AND MINERALS SECTOR

MINING QUALIFICATIONS AUTHORITY

TOPLINE RESEARCH SOLUTIONS
Insights for growth

APRIL 2024

Table of Contents

List of figures ..... **vi**

List of tables ..... **vi**

List of acronyms ..... **vii**

Glossary of Terms ..... **ix**

Abstract ..... **xii**

CHAPTER ONE: INTRODUCTION AND BACKGROUND **1**

1.1 Introduction and background 1

1.2 Background to the project 2

1.3 Background to the mining sub-sectors 3

1.3.1 Background of the participating mining companies 6

Overview of the Staff composition of the MMS 14

1.4 Research Objectives 17

1.5 Significance of the Study 17

1.6 Summary 18

CHAPTER TWO: RESEARCH METHODOLOGY **19**

2.1 Introduction 19

2.2 The paradigm perspective and research methodology 19

2.3 Research design 21

2.4 Sampling methods used. 22

2.4.1 Purposive Sampling for Minerals council and Department of Minerals Resources and Energy 23

2.4.2 Systematic Simple random sampling for members of the organised labour 23

2.4.3 Quota Sampling for Employees with Disabilities (PWD) 24

2.4.4 Quota Sampling for HR Experts 24

2.4.5 Quota Sampling for Senior Managers/ Managers in the sub-sectors 24
2.5 Data collection 25
2.5.1 In-Depth Interviews (IDIs) 25
2.5.2 Focus Group Discussion (FGD) Guides 25
2.5.3 Documents review/ analysis 26
2.6 Administration of data collection process 26
2.7 Data analysis 27
2.8 Trustworthiness 28
2.9 Ethical considerations 29
2.10 Summary 30
CHAPTER THREE: LITERATURE REVIEW, THEORETICAL AND CONCEPTUAL FRAMEWORK 32
3.1 Introduction 32
3.2 Empirical literature review 32
3.2.1 Social and cultural factors 33
3.2.2 Organisational factors 37
3.3.3 Personal factors 47
3.4 Overview of factors affecting the employment of people with disabilities 49
3.5 A synopsis of disability landscape in South Africa 50
3.6 Population dynamics and its influences on employability of PWDs 54
3.7 Geographic Distribution 55
3.7 South African Mining Map 56
3.9 Theoretical Review 57
3.9.1 Theoretical literature 57
3.9.2 Social model of disability 57
3.9.3 Stigma model of disability 60
3.9.4 Human rights model 63

3.10 Conceptual framework 67
3.10.1 Disability defined 67
3.10.2 Social factors 68
3.10.3 Organisational factors 69
3.10.4 Personal factors 69
3.11 Policy and legislation governing employment of persons with disabilities 69
3.12 Summary 78
CHAPTER FOUR: FACTORS IMPEDING ATTAINMENT OF EQUITY TARGETS WITH RESPECT TO PEOPLE WITH DISABILITIES IN THE MINING AND MINERALS SECTOR 80
4.1 Introduction 80
4.2 To realise training interventions that are put in place in the MMS to enable employment of PWDs. 81
4.2.1 Findings from documents analysis 81
Workplace Skills Plans/Annual Training Reports 88
4.3 Understanding the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs. 93
4.3.1 The nature of employment profile of PWDs employed 93
4.4 To understand the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs; 99
4.5 Factors influencing the attraction and retention of employees with disabilities in the MMS 105
4.5 Factors influencing the attraction of employees with disabilities in MMS. 114
Seamless Entry into MMS: Minimal Challenges 117

Upon acceptance into MMS, participants described a straightforward process with clear instructions and minimal challenges. A three-day training period paved the way for employment. The ease of application and acceptance fostered a positive

perception of the company. In addition, participants discussed their experiences as employees with disabilities as follows: 117

Support and Opportunities 117

"*There are opportunities for growth and development, including the funding options available for starting a personal jewellery business, the conducive environment at MMS, coupled with non-discriminatory policies, contributed to a positive working atmosphere"*..... 117

Unique Industry Appeal..... 117

"*We were drawn to MMS due to positive feedback from friends and the uniqueness of the jewellery industry. We appreciated the opportunity to stand out by engaging in a field that differs from more conventional professions".* 117

Focus Group Discussion, 2024 (Jewellery)..... 117

4.6 To recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS..... 120

Cross case analysis..... 125

4.5 Summary..... 119

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS..... 120

5.1 Introduction 120

As we embark on the final chapter of this study, it is an opportune moment to reflect on the myriad paths we have traversed in the exploration of factors impeding attainment of equity targets with respect to people with disabilities in the mining and minerals sector. From the inception of our research inquiry to the meticulous analysis of data, each step has contributed to the tapestry of knowledge we have woven. In this concluding chapter, we delve into a comprehensive synthesis of our findings, drawing connections between the threads of evidence and weaving a narrative that encapsulates the essence of our exploration. 120

5.2 Research overview..... 121

5.3 Recommendations of the research 122

Specific recommendations for the Mining Qualifications Authority on Inclusivity and Support to Persons with Disabilities (PWDs) in the Mining and Minerals Sector (MMS) 130

RECOMMENDATION 1: MQA must ensure mechanisms to address specific disabilities 131

OBJECTIVE 2 – Factors influencing the attraction and retention of employees with disabilities in the MMS 133

Recommendation 4: Cultivating patience and supportive culture 134

OBJECTIVE 3 – To realise training interventions that are put in place in the MMS to enable employment of PWDs. 136

Recommendation 5: Tailored training and employment strategies 136

RECOMMENDATION 6: Ensure safe and user-friendly environment 137

RECOMMENDATION 7 - Develop Awards Programme for Compliant Mines: 140

RECOMMENDATION 8: Enforce compliance With Code Of Good Practice . 141

Recommendation 9: Combating discrimination and promoting inclusivity 143

Recommendation 10: MQA should lead collaborations in the MMS 145

5.4 **Research contributions** 148

5.4.1 **Practical contributions in line with the recommendations** 148

5.4.2 **Theoretical contributions** 149

5.4.3 Synthesis of Theoretical Frameworks: 151

5.5 Limitations and delimitations of the research 151

5.6 Recommendations for future research 151

5.7 Summary 153

List of figures

Figure 2.1: Research onion 15
Figure 2.2. Interaction model 16
Figure 3.1 Disability in South Africa 44
Figure 3.2 Disability by age 44
Figure 3.3 Disability by race 45
Figure 3.4 Disability by Province 45
Figure 3.5 Population spread in South Africa - Source: Statistics South Africa 48
Figure 3.6 Geographic distribution of MMS in South Africa 49
Figure 3.7 South African Mining Map - Adapted from: Utembe et.al (2015) 49
Figure 3.8 Conceptual framework 60
Figure 4.1 Learnerships completed by employed individuals 70
Figure 4.2 Learnerships completed by unemployed individuals 74
Figure 4.3 Training by sub-sector 79

List of tables

Table 3.1: Summary of the factors that impact on employment of PWDs 43
Table 4.1: Top 3 learnerships completed by individuals: 2019 75
Table 4.2: Top 3 learnerships completed by individuals: 2021 75
Table 4.3: Top 3 learnerships completed by individuals: 2022 76
Table 4.4: Apprenticeships 2018 78
Table 4.5: Training provided annually 80
Table 4.6: Top 5 training programmes offered 80
Table 4.7: Specific training courses 82
Table 4.8: Training received by Province 84
Table 4.9: Profile of PWDs employed 85
Table 4.10: Percentage of PWDs trained 85
Table 4.11: Top 5 qualifications obtained by PWDs 86
Table 4.12: Top 5 skills obtained by PWDs 87
Table 4.13: Training of PWDs by sub-sector 88
Table 4.14: Training of PWDs by Province 88

List of acronyms

APP	Annual Performance Plan
CLAS	Cement, Limestone, Aggregates, and Sand
HR	Human Resources
4IR	Fourth Industrial Revolution
AASA	Anglo American South Africa
B-BBEE	Broad-Based Black Economic Empowerment
CRPD	Convention on the Rights of Persons with Disabilities
DBSSSA	De Beers Sightholder Sales South Africa
EEA	Employment Equity Act
INDS	Integrated National Disability Strategy
MMS	Mineral and Mining Sector
MPRDA	Minerals and Petroleum Resources Development Act
MQA	Mining Qualification Authority
PEPUDA	Promotion of Equality and Prevention of Unfair Discrimination Act
PGMs	Platinum Group Metals
PWDs	People with Disabilities
WPRPD	White Paper on the Rights of Persons with Disabilities
IT	Information Technology
PASA	Petroleum Agency South Africa
ERRP	Economic Recovery and Reconstruction Plan
EXCO	Executive Committee
FGDs	Focus Group Discussions
MHSA	Mine Health and Safety Act, 29 of 1996
IDIs	In-Depth Interviews
Mining Charter	Broad Based Socio-economic employment charter for the Mining and Minerals industry
MQA	Mining Qualifications Authority
NSDP	National Skills Development Plan, 2030
NSDS	National Skills Development Strategy
PFMA	Public Finance Management Act, 1 of 1999

PWDs	People with Disabilities
SAMRA	Southern African Marketing Research Association
SDA	Skills Development Act, 97 of 1998
SETA	Sector Education and Training Authority
SITM	Services Incidental to Mining
TRS	Topline Research Solutions
APP	Annual Performance Plan
HR	Human Resources
MEMSA	Mining Equipment Manufacturers of South Africa
MerSETA	Manufacturing, Engineering and Related Services Sector Education and Training Authority
MMS	Mining and Minerals Sector
MHSC	Mine Health and Safety Council
MHSA	Mine Health and Safety Act
NDP	National Development Plan
PGM	Platinum Group Metals
QCTO	Quality Council for Trades and Occupations
SHE&Q	Safety, Health, Environment and Quality
SMART	Specific, Measurable, Achievable, Relevant and Time-Bound
ToR	Terms of Reference
TVET	Technical and Vocational Education and Training
KP LIME	Formerly PPC Lime
OMP	Occupational Medical Practitioner

Glossary of Terms

Barriers to Employment	Obstacles faced by individuals with disabilities when entering the workforce, including physical obstacles, attitudinal barriers, lack of necessary facilities, and policy-related barriers
Physical Environment	Encompassing factors like infrastructure, equipment, and machinery that can act as barriers to the employment of people with disabilities
Organisational Factors	Internal characteristics of an organisation that impact its functioning and performance, such as infrastructure, policies, and facilities
Inclusive Education	Educational efforts aimed at accommodating the special needs of individuals with disabilities to enhance their human capital levels
Stigma and Discrimination	Negative perceptions and prejudiced attitudes towards individuals with disabilities, leading to low self-esteem, depression, and hindrance in seeking employment
Equal Employment Opportunities	Fairness and preventing Legal requirements aimed at promoting discrimination in the workplace, including for individuals with disabilities (Botha et al., 2023).
Skills Gap	Discrepancy between the skills possessed by individuals with disabilities and the skills required for specific employment roles
Career Plateaus	Challenges faced by disabled employees in career advancement, often due to lack of awareness and discriminatory human resource practices
Social Model of Disability	Perspective suggesting that stigma and discrimination contribute to the exclusion of people with disabilities from society, including employment

Self-Esteem and Psychosocial Challenges	Personal factors influencing the mental health of individuals with disabilities, impacted by discrimination, attitudes, and corporate culture
Phenomenological Studies	Research that explores the lived experiences of individuals with disabilities, highlighting challenges and barriers faced in employment
Transformational Leadership	Leadership style that emphasises inspiration, individual consideration, and creating an inclusive environment to promote the inclusion of people with disabilities in the workplace
Diversity and Inclusion	Efforts to promote a workforce that includes individuals with disabilities, fostering collaboration, innovation, and better relationships with customers
Hiring Intentions	The willingness or reluctance of employers to hire individuals with disabilities, influenced by educational and marketing interventions
Employer Concerns	Worries and reservations of employers regarding the costs, legal ramifications, and lack of awareness associated with providing accommodations for employees with disabilities
Reasonable Accommodations	Modifications or adjustments in the workplace to enable the employment of people with disabilities and provide them with equal opportunities
Corporate Culture	Shared values, beliefs, and practices within an organisation that influence attitudes and actions towards hiring or managing employees with disabilities
Negative Stereotypes and Stigmatisation	Persisting beliefs and discriminatory attitudes towards individuals with disabilities, impacting their acceptance and equal opportunities in the workplace

Employment Barriers in South African Public Service	Infrastructural, organisational, managerial, and psychosocial factors identified as major hindrances to the employment of people with disabilities
Human Resource Management Practices	Strategies and policies related to the management of employees, including hiring practices and accommodation measures

Abstract

This report presents the findings from the research conducted, which aimed at investigating the barriers to attainment of disability equity targets within the Mining and Minerals Sector (MMS) in South Africa. The mining and minerals sector stands as a cornerstone in the economic landscape, contributing significantly to the nation's prosperity through job creation and fostering overall economic growth.

The employment of People with Disabilities (PWDs) in the MMS has persistently remained below the stipulated targets (MQA, 2021). Over the years, the percentage of PWDs employed within the sector has shown incremental improvement but remains relatively low. In 2016 and 2017, the figures stood at 0.9% and 0.8%, respectively, fluctuating marginally between 0.9% and 0.8% in 2018 and 2019, before experiencing a notable increase to 1.4% in 2021 (MQA, 2021). These statistics unveil a stark reality where a considerable number of individuals with disabilities in South Africa are excluded from the economic prospects and employment opportunities offered by the Mining and Minerals Sector.

The key consideration in the study of this nature is the need to, understand the nature of the employment profile with respect to provincial, sub-sectoral, racial, gender, age and occupational distribution of PWDs, identify the factors influencing the attraction of employees with disabilities in the MMS, realise training interventions that are put in place in the MMS to enable employment of PWDs and recommend strategies that can be put in place to improve the absorption of PWDs in the labour market within MMS. In this regard, the approach followed was that of a qualitative study, focusing on the sub-sectors in the mining sector and data was collected through in-depth interviews, focus group discussions and documents review.

CHAPTER ONE: INTRODUCTION AND BACKGROUND

1.1 Introduction and background

This Report, prepared by Topline Research Solutions on behalf of the Mining Qualifications Authority (MQA), delves into the challenges hindering the achievement of employment targets for individuals living with disabilities within the Mining and Minerals Sector (MMS). The research focuses on investigating the factors impeding attainment of employment equity targets in respect of people with disabilities within the MMS. The aim is to shed light on the barriers faced by people with disabilities in accessing employment opportunities,

The report is grounded in the feedback obtained from a diverse range of key stakeholders, encompassing employers and training providers across all MMS sub-sectors, employer affiliation bodies, labour unions, and other influential entities within the MMS. Noteworthy contributors include representatives from the Minerals Council, Department of Minerals and Energy, PWDs, MMS and Labour unions. The study is aimed at identifying the personal, social, organisational factors shaping the MMS landscape with regards to the people with disabilities. By collecting, consolidating, analysing, and assessing relevant data, this study aims to provide insights into the key achievement, challenges, and recommendations regarding the employment of the people with disabilities in the MMS.

Of particular concern is the examination of barriers faced by individuals with disabilities in securing employment within the MMS. By weaving the experiences and challenges encountered by this demographic into the broader analysis of skills demand and supply, the report aims to illuminate the specific hurdles that hinder the realisation of inclusive employment targets. The investigation also addresses the ways in which changing technology has shaped occupations and skill requirements within the MMS, thereby influencing the employment landscape for all individuals, including those with disabilities.

In addition to presenting a thorough examination of the challenges, the report endeavours to provide practical recommendations. These recommendations are crafted to guide the MQA in formulating responsive strategies to address the identified skills demands within the MMS. By doing so, the report contributes not only to understanding the barriers faced by people with disabilities but also to fostering an inclusive and adaptive workforce within the MMS. The study will assist all stakeholder in the mining sector in terms of policy improvements, monitoring implementation and creating a conducive environment for inclusivity.

1.2 Background to the project

The persistent inability of the mining sector to meet its employment targets, particularly concerning individuals with disabilities, underscores the need for a comprehensive examination of the existing barriers.

Recognising this imperative, a meticulous exploration has been initiated, adopting a three-pronged research approach. This multifaceted strategy encompasses document analysis, in-depth interviews, and focus group discussions, each chosen strategically to address the limitations inherent in individual data collection methods.

The mining sector, despite its economic significance, grapples with a notable shortfall in achieving inclusive employment targets, especially for individuals with disabilities. This project seeks to unravel the intricacies of these barriers, aiming to uncover nuanced insights through a triangulation of data collection methods. The employment disparities within the sector not only hinder the realisation of diversity and inclusion goals but also create an invisible divide among community members who share the same geographic spaces.

The first arm of the research involves a meticulous document analysis, scrutinizing existing policies, industry reports, and relevant literature. This method allows for the identification of institutional frameworks, regulations, and historical trends that may contribute to the existing employment gaps for people with disabilities in the mining

sector. By grounding the investigation in existing documentation, the project gains a historical and regulatory context, providing a foundation for subsequent analyses.

Complementing the document analysis, the research incorporates in-depth interviews with key stakeholders involved in the mining sector, including representatives from mining companies, regulatory bodies, advocacy groups, and individuals with disabilities working or seeking employment in the sector. The qualitative insights garnered through these interviews aim to capture the lived experiences, perspectives, and challenges faced by different stakeholders. This method ensures a nuanced understanding of the human aspects underlying the employment disparities.

Furthermore, the project employs focus group discussions to foster a collective exploration of the issues at hand. Bringing together diverse stakeholders, such as employers, employees, disability advocacy organisations, and community representatives, these discussions aim to uncover shared perceptions, communal challenges, and potential collaborative solutions. The interactive nature of focus group discussions facilitates the emergence of collective wisdom and fosters a deeper understanding of the social dynamics contributing to the employment gaps.

The current situation, characterised by unmet employment targets and a silent rift between communities, necessitates a research initiative that goes beyond mere statistical analysis. By embracing a comprehensive, three-pronged approach, this project aspires to illuminate the multifaceted barriers hindering the employment of individuals with disabilities in the mining sector. Through this exploration, it seeks to inform targeted interventions and policy recommendations, fostering a more inclusive and equitable employment landscape within the mining sector and the communities it serves.

1.3 Background to the mining sub-sectors

South Africa is rich in mineral resources, and the mining sector plays a crucial role in the country's economy. The mining and minerals subsectors encompass various activities and resources, contributing significantly to both domestic and international markets. Here's an overview of the key subsectors that are part of this research, within the broader

mining and minerals industry in South Africa.

- **Gold Mining**, South Africa has a long history of gold mining, dating back to the late 19th century. It was a major driver of the country's economy for decades. Although gold mining has declined in recent years due to aging mines and increased production costs, South Africa is still a significant global gold producer, Nordling (2016).
- **Platinum Group Metals (PGMs)***:* South Africa is a leading producer of platinum, palladium, rhodium, ruthenium, iridium, and osmium—collectively known as PGMs. These metals are crucial in catalytic converters, jewellery, and various industrial applications. PGMs contribute significantly to South Africa's export revenue, and the country holds the world's largest reserves of platinum.
- **Diamond Mining***:* South Africa has been a major player in the global diamond industry, and its mines have produced some of the world's most renowned diamonds. While diamond production has declined compared to historical levels, the country remains an important diamond producer.
- **Coal Mining:** South Africa has abundant coal reserves, and coal has traditionally been a major energy source and a significant export commodity. Coal mining continues to play a vital role in providing energy for domestic use and supporting the country's industrial activities.
- **Other Mining commodities:** The sector incorporates extraction and processing of minerals. Predominantly, it operates in the Provinces of Limpopo and Western Cape in South Africa.
- **Jewellery manufacturing Besides** diamonds, South Africa is also home to various other gemstones, including sapphires, emeralds, and tanzanite. These gemstones contribute to the diversity of the country's jewellery offerings. The local jewellery market caters to a broad range of consumers, from high-end luxury items to more affordable pieces.
- **Cement, Lime, Aggregates and Sand (CLAS):** South Africa has several cement production facilities, and cement mining involves the extraction of raw materials such as limestone and clay. Major cement producers in the country contribute to both domestic construction needs and export markets. Aggregates, which include materials such as crushed stone, gravel, and sand, are essential components in the construction industry for making concrete and asphalt.

- **Diamond Processing**: Diamond processing in South Africa plays a crucial role in the global diamond supply chain. South Africa has a rich history of diamond mining, dating back to the late South Africa remains one of the world's leading producers of quality diamonds. The diamond processing industry in South Africa encompasses various stages, from mining and sorting to cutting, polishing, and jewellery manufacturing.
- **Services incidental to mining (SITM):** This refers to support activities and services that are essential for mining operations but are not directly involved in the extraction of minerals. They exist to ensure smooth functioning and efficiency of mining activities.

Historically, South Africa has been a major player in the gold mining industry. The Witwatersrand Basin, located in Gauteng province, is one of the world's largest gold reserves (Tucker *et. al* 2016). Platinum Group Metals (PGM) Mining, which includes platinum, palladium, and rhodium, is concentrated in the Bushveld Complex in the northern part of the country (Campbell *et. Al*, 2011). Major PGM producers operate in areas such as Rustenburg and Polokwane. Coal Mining is widespread across various provinces, including Mpumalanga, Limpopo, Free State, and KwaZulu-Natal. Mpumalanga is particularly known for its coal reserves and numerous coal mines, (Matjie et al., 2016). Diamond Mining activities are primarily in the Northern Cape and Northwest Provinces, Mahumapelo and Magaseng. The Premier Mine in Cullinan and the Finsch mine are examples of significant diamond mining operations, Tucker et al. (2016). Diamond Processing facilities are often located near major diamond mining areas. The cutting and processing of diamonds may not be as regionally concentrated as mining activities, (Westhuizen et.al., *2*014). Other Mining, various other minerals and metals are mined in different regions of South Africa, including iron ore, manganese, chrome, and more. The geographic distribution depends on the specific mineral resources. Jewellery Manufacturing is not confined to specific mining regions but is more linked to urban centres and industrial zones. Johannesburg, for example, has a significant presence in the jewellery industry. Services Incidental to Mining, support services for the mining industry, such as equipment manufacturing, engineering services, and consulting, are often located in urban and industrial areas with good infrastructure (Campbell et. al., 2011).

1.3.1 Background of the participating mining companies

The ensuing narrative is an extract from individual participating company. Knowing the history, mission, vision, values, and organizational culture of a company provides researchers with essential context. This understanding helps interpret findings within the broader framework of the company's goals, strategies, and practices. When conducting research within a company, having knowledge of the organization's background helps researchers establish rapport with stakeholders. Demonstrating an understanding of the company's history, industry context, and current priorities can enhance credibility and trust. Therefore, the following company's background has been highlighted;

Pneuma Jewellers (Pneuma Jewellers CC, 2019)

The company described seems to be engaged in the production of handcrafted delights, likely in the confectionery or food industry. However, what stands out is their commitment to inclusivity through training and mentoring programs for underprivileged and marginalised individuals. This commitment reflects a strong organisational culture that values diversity and social responsibility. The focus on training and mentoring underprivileged and marginalised individuals in skills programs, learnerships, graduate development programs, and train-the-trainer initiatives is an excellent example of inclusivity. By providing opportunities for individuals who may face barriers to entry in the job market, the company is actively contributing to social upliftment and addressing the shortage of skilled tradesmen. This aligns with a culture that recognises the importance of equal opportunities and empowerment for all. The specific mention of the critical danger of the trade collapsing without rapid revitalisation emphasises the company's awareness of broader industry challenges and its proactive approach to addressing them. This sense of urgency suggests a commitment not only to their own success but also to the sustainability of the industry.

The emphasis on training "Super-Artisans" with multiple qualifications in goldsmithing, diamond setting, engraving, and CAD design as an extra, positions the company as a leader in providing comprehensive and advanced training. This focus on producing well-rounded professionals not only adds value to the industry but also supports the development of future leaders.

In summary, the company's commitment to inclusivity, social responsibility, and industry

sustainability is evident through its training and mentoring programs. The emphasis on comprehensive skills development and the creation of "Super-Artisans" reflects a forward-thinking approach to addressing industry challenges and fostering a culture of continuous learning and excellence.

Ndebele Mining (Ndebele Mininig, 2019)

Ndebele Mining Company, has emerged as a cornerstone in the clay mining industry, consistently delivering clay mixes of the highest quality. The success of the mine is deeply rooted in the values and family-centric approach fostered by Leon Joubert and his respectable family, permeating throughout the entire organisation. This commitment to community support not only reflects the company's ethos but also contributes to a culture of inclusivity and equal opportunity. This familial atmosphere is a key differentiator for Ndebele Mining, creating a workplace environment where employees feel valued and connected. The organisational culture places a significant emphasis on the values instilled by the Joubert family and the rich heritage of the Ndebele culture(source)

.

This commitment to excellence reflects a dedication to equal opportunity, as all employees are empowered to contribute to the company's success, irrespective of their background. Safety is a paramount concern for Ndebele Mining, emphasising the well-being of its staff. The company adheres to rigorous safety standards, including the Minerals and Mine Health and Safety Standard, South African Bureau of Standards, and South African National Standards. This commitment ensures that employees are well-trained, prepared, and equipped with the necessary safety gear, creating a secure working environment. In essence, Ndebele Mining Company's success is not only measured in the quality of its clay mixes but also in the inclusive, non-discriminatory, and equal opportunity culture that permeates the organisation. The company's dedication to community, safety, and environmental responsibility reinforces its commitment to being a responsible and values-driven entity in the clay mining industry.

The PWDs have been raising concerns over safety, given the nature of the MMS sector, however the above narrative provide relief to the targeted group.

KP Lime

KP Lime's organisational culture is strongly characterised by a commitment to technological advancement. The emphasis on cutting-edge technology, evident in its end-to-end operational process, reflects a culture that values innovation and staying at the forefront of industry developments. The utilisation of advanced kilns and efficient mining operations showcases a dedication to maintaining a technologically advanced and competitive position in the lime production sector. The acquisition of PPC's Lime mining operations and the subsequent establishment of KP Lime demonstrate a commitment to the workforce. The company's roots in a consortium of mineral resources experts suggest an emphasis on hiring and retaining industry professionals. The advanced operational processes also indicate a focus on providing a work environment where employees can engage with state-of-the-art technologies, contributing to a culture of continuous learning and professional growth.

KP Lime's significant contribution to almost 60% of the lime consumed in Southern Africa indicates its integral role in the industry. This market presence suggests an inclusive approach, contributing to the economic landscape of the region. The company's operations not only focus on efficiency but also on meeting a substantial portion of the lime needs in the area, contributing to economic development and inclusivity within the lime production sector. While the provided information doesn't explicitly detail employee support programs, the commitment to cutting-edge technology and efficiency indirectly supports the workforce. Employees engaged in advanced processes and technologies are likely to receive training and development opportunities, fostering a culture of continuous improvement and professional development.

The operational processes involving extraction, production, and logistics require specialised skills. KP Lime's commitment to technology and expertise implies a necessity for ongoing training and development initiatives. This aligns with a culture that values the growth and skill enhancement of its workforce to maintain proficiency in handling advanced technologies. Overall, KP Lime's narrative is one of technological leadership and operational excellence, with a clear alignment to an organisational culture. The company's commitment to innovation, efficiency, and customer satisfaction positions it as a forward-thinking and inclusive player in the lime production industry in Southern

Africa (KP Lime, 2018).

Northam Platinum Holdings (Northam Platinum Holdings Limited, 2024)

Northam's commitment to being a self-sufficient and empowered producer of platinum group metals (PGMs) is indicative of a strong and independent organisational culture. The emphasis on increasing production efficiency and reducing operational risks aligns with a culture that values continuous improvement and strategic planning. The strategic focus on increasing production efficiency suggests a commitment to optimising workforce capabilities. As the company aims for the aspirational target of producing 1 million ounces of 4E per annum, it is likely to involve the active engagement and support of its workforce to meet production goals. The mature mine, Zondereinde, under Northam's umbrella, indicates the company's ability to sustain operations and provide ongoing employment. While the provided information does not explicitly mention inclusivity, the commitment to being a self-sufficient producer can indirectly contribute to regional economic inclusivity.

The commitment to empowerment suggests a focus on supporting the workforce by providing them with the necessary tools, resources, and opportunities to contribute to the company's goals. The integrated approach to PGM production, covering underground mining, concentrating, smelting, and base metal removal, implies a comprehensive support system for the workforce involved in diverse aspects of the production process. Northam's high-level summary reflects a distinct organisational culture centered around self-sufficiency, empowerment, and an integrated approach to PGM production. The strategic goals and commitments to efficiency, production growth, and workforce support position Northam as a forward-looking player in the industry. The emphasis on ongoing development, inclusivity through regional economic contributions, and a commitment to strategic goals collectively contribute to Northam's standing as a significant and sustainable producer of platinum group metals.

JCI Mining (PTY) LTD

JCI Mining, established in 2007, began as a plant hire provider for earthmoving equipment and evolved into a comprehensive contract mining solution. Over the years, the company expanded its services to include small sub-contract load and haul projects, offering a complete range of Opencast Mining services to clients. The company places a

strong emphasis on safety, ensuring compliance with relevant legislation and mining standards on all operated mines. With a dedicated safety department, Mining maintains a stellar safety record, boasting 14 years of operation without a single fatality.

The commitment to safety aligns with the company's culture, highlighting its responsibility in providing a secure working environment for its employees. The information provided does not specifically address employment opportunities for disabled individuals, and it would be valuable to explore additional details on the company's inclusivity initiatives and support for disabled workers. In their strategic approach, the company, a provider of technology and Smart Sourcing services specialising in global supplier and contractor management, acknowledges the dynamic nature of their operating environment. The sector's rapid changes demand continuous adaptation, prompting the company to actively seek innovative partners with fresh proposals capable of navigating and embracing ongoing challenges. Leveraging technology as a key enabler, the company redefines its relationship with the environment to assist clients in enhancing their connections with other suppliers and partners. Real-time coordination of people, machines, and companies within the productive process is a central focus, aimed at reducing occupational accidents and elevating service quality (JCI Mining, 2022).

Clever Global - Mining Sector

The company exhibits a client-centric organisational culture, where client needs take precedence. This culture emphasises a strong commitment to understanding, addressing, and tailoring solutions for unique client requirements. The client-centric approach suggests a value system that prioritises customer satisfaction and responsiveness. While the provided information does not explicitly discuss employment practices, the client-centric philosophy implies that the workforce is likely aligned with the company's commitment to meeting client needs. The emphasis on customised solutions suggests a need for a skilled and adaptable workforce capable of delivering diverse and tailored services. The information provided does not explicitly address inclusivity initiatives or support for a diverse workforce. However, a client-centric approach often requires a workforce that reflects diversity to effectively understand and cater to a wide range of client needs. More details on inclusivity measures would provide a comprehensive understanding of the company's commitment to diversity.

The focus on technologically advanced and customised solutions suggests a need for ongoing training and development programs. This would be essential for equipping the workforce with the necessary skills to leverage advanced technologies and deliver tailored solutions. Training and development initiatives would align with the dynamic nature of global supplier and contractor management. The strategic direction revolves around embracing change and leveraging technology for real-time coordination. This indicates a proactive approach to industry advancements, innovation, and adaptability. The emphasis on real-time coordination suggests a reliance on cutting-edge technologies, necessitating a workforce trained to navigate and utilise these tools effectively.

The core of the company's strategic approach is meeting the specific requirements of clients. This not only highlights a commitment to customer satisfaction but also emphasises the importance of understanding and tailoring solutions for diverse client needs. The focus on customisation positions the company as a flexible and responsive player in the global supplier and contractor management sector.

The company's summary reflects a client-centric organisational culture, with a strategic emphasis on customisation, technology, and adaptability. While the information provided doesn't delve into specific employment or inclusivity practices, the client-centric approach suggests a workforce aligned with the company's commitment to meeting diverse client needs. Further details on workforce initiatives, training programs, and inclusivity measures would provide a more comprehensive understanding of the company's internal practices and values (Yellow Media, 2024).

Jubille Group

Jubilee Metals Group's organisational culture is framed around a commitment to sustainability and resource efficiency. This implies a core value system that prioritises responsible and environmentally conscious practices in its operations. The focus on diversified metals recovery further suggests an adaptability and openness to exploring various avenues within the mining industry.

While the provided information doesn't explicitly address inclusivity, the commitment to sustainability implies an awareness of broader social and environmental impacts. A more

comprehensive understanding of inclusivity measures within the company would be valuable, particularly regarding diverse workforce practices and community engagement.

Jubilee Metals Group, being a prominent metals recovery business, contributes to employment opportunities in South Africa and Zambia. The extraction of value from overlooked resources indicates a commitment to maximising economic benefits, likely leading to job creation and sustainable employment within the regions where the company operates. The focus on retreatment and recovery of metals from various sources suggests a need for specialised skills and expertise. This implies ongoing training and development initiatives within the organisation to equip the workforce with the necessary knowledge and capabilities to handle diverse materials and contribute to the company's value extraction process.

Jubilee Metals Group's summary reflects a commitment to sustainability, value creation, and resource efficiency. While the information provides insights into the company's overall ethos, a more detailed exploration of inclusivity measures, specific employment practices, and training and development initiatives would offer a more comprehensive understanding of its organisational dynamics. This summary, however, highlights key aspects of the company's culture and operations that contribute to its standing as a significant player in the metals recovery industry (Jubilee Metal Group, 2023).

(DRD Gold) Ergo Mining Academy

DRD Gold's strategic shift from deep-level underground mining to large-scale retreatment reflects a culture that values adaptability and sustainability. The commitment to environmental responsibility suggests a culture that prioritises ethical mining practices and social responsibility.

While the information doesn't explicitly discuss employment practices, the significant transformation in mining approach implies a need for a workforce capable of executing the new strategy. The development of necessary skillsets and systems suggests a commitment to supporting the workforce through training and adaptation to new methodologies. The transformation initiative indirectly highlights an inclusive approach by addressing environmental and community well-being. The positive impact on the quality of life for residents suggests a consideration for the broader community. More details on

specific inclusivity measures within the company would provide a comprehensive understanding of its commitment to a diverse and supported workforce.

The shift in mining approach requires a skilled workforce capable of executing large-scale retreatment of mine dumps and tailings dams. The company's investment in developing the necessary skillset and systems indicates a commitment to ongoing training and development to equip the workforce with the skills required for the new approach. The shift in mining approach, along with considerations for the workforce and local communities, suggests an organisational culture that values sustainability, adaptability, and ethical practices. Further details on employment and inclusivity practices within the company would enhance the understanding of its internal dynamics and commitment to supporting its workforce (DRD Gold, 2023).

Trans Hex Diamond Mining

Trans Hex Group is a long-standing diamond mining company with over 50 years of experience in producing high-quality diamonds for both local and international markets. The company operates in South Africa, Namibia, and Angola, engaging directly and through joint ventures in exploration, mining, and marketing of diamonds from marine and land alluvial deposits. Established in 1965, Trans Hex Group started as a diamond-mining concession in the Namaqualand region of the Northern Cape. Over the years, it expanded its assets and expertise through acquisitions of various diamond-mining companies in Southern Africa and beyond.

The company has continued to pursue its business objectives, such as acquiring a 33% stake in the Luana project (Somiluana Mine) in Angola in 2010 and acquiring 100% of International Mining and Dredging Holdings in 2022, which was subsequently rebranded as Trans Hex Marine.

From a compliance standpoint, as a mining company operating in multiple countries, Trans Hex Group would need to adhere to various regulations and laws governing the mining industry, environmental protection, labour practices, and more in each jurisdiction where it operates. The PWD inclusivity and compliance phenomenon falls within these parameters. Compliance with these regulations is crucial for maintaining the company's reputation and sustaining its operations in the long term (Trans Hex Group, 2021).

Portland Quarry

Portland Quarry, operated by Portland Group, is a leading supplier of construction materials in Cape Town, South Africa. Specialising in aggregates, concrete products, and ready-mix concrete, the quarry provides high-quality materials for various construction projects. With a strategic location facilitating easy access across the Western Cape province, Portland Quarry serves both commercial and residential clients. Committed to quality, customer service, integrity, innovation, and environmental stewardship, the company aims to be a trusted partner in the construction industry. Established to meet growing demand, Portland Quarry has expanded steadily, serving a diverse clientele including contractors, developers, and government agencies. Looking ahead, the company is focused on growth, innovation, and sustainability to maintain its position as a reliable supplier for construction projects in the region and beyond.

The background information on the mining companies that participated in the study was obtained from the individual company websites and reports. It is based on analysis of what the companies provided. It is therefore information in the public domain (Portal Quarry, 2020).

Overview of the Staff composition of the MMS

In the mining and minerals sector, roles can be distinguished as core, support, artisans and general labour. According to the MQA Career Guide for MMS (2021), across subsectors, a variety of positions exist for professionals, technicians and trades workers, machinery operators and drivers, as well as elementary workers/labourers.

Professionals in fields such as mining, mechanical, electrical, and metallurgical engineering, along with geologists, scientists, surveyors, and others, are essential for the extraction and processing of minerals. These roles encompass technical expertise, financial management, legal services, and human resources. While many of these positions require specific technical qualifications, there are opportunities for people with disabilities in roles such as Accountants, Economists, Human Resources Advisors, Management Accountants, and Training and Development Professionals, among others.

Technicians and trades workers, including mining engineering technicians and artisans, support engineers in various operations within a mine, specializing in areas such as safety, production, design, ventilation, water supply, and equipment maintenance. They oversee various aspects of mine operations, including exploration, production, and management. While these roles may involve physical tasks, accommodations can often be made to accommodate people with disabilities, depending on the specific requirements of the position and the nature of disability.

In the mining and minerals sector, the operation of expensive and technologically advanced equipment is vital for both underground and surface operations. Safety and cost efficiency are paramount concerns, leading to the use of automation, mechanization, and computer technology to improve efficiency and maximize production. Equipment operators, including boiler or engine operators, bulldozer operators, drillers, and miners, play a crucial role in ensuring the smooth functioning of mining operations.

Machinery operators and drivers operate advanced equipment crucial for underground and surface operations in the mining sector. In these positions, Safety and efficiency are paramount, with technology playing a significant role in enhancing productivity. However, roles such as Train and Truck Drivers and Earthmoving Plant Operators may be accessible to individuals with disabilities, depending on the nature of the work and available accommodations.

Elementary workers/labourers form the backbone of many mining operations, performing tasks such as construction rigging, drilling assistance, earthmoving, and general mining support. These roles often involve physical labour and may present challenges for individuals with disabilities. However, accommodations and support systems can be implemented to enable the participation of people with disabilities in these positions wherever feasible.

Non-technical personnel are also essential, providing financial, personnel, legal, and other services necessary for the sector's functioning. This diverse range of professionals includes accountants, civil engineers, economists, human resources advisors, and management accountants, among others.

Despite the interventions towards improving employment of PWDs in the MMS, another challenge facing the sector is that of skills shortage. According to the 2015-2016 Regional Sector Skills Plan (RSSP), cited in MQA Career Guide (2021), the mining and minerals sector faces significant challenges in filling certain key occupations, as outlined in the MQA Career Guide. Among the top 10 hard-to-fill occupations identified, technicians, trade workers, machine operators, drivers, and professionals in various fields are particularly scarce. The MQA Career Guide (2021) mentions Geographic location, high salary expectations, a lack of requisite management skills, and the absence of suitable candidates as challenges resulting in difficulties in filling these vacancies. Similarly, Mine Planners face challenges stemming from insufficient planning experience within the sector and a shortage of Historically Disadvantaged South Africans (HDSAs). Again, the Ame report cites high salary demands, geographic location, and a lack of candidates with Government Certificate of Competency (GCC). Rock Engineers, Surveyors, and Rigger Ropesmen also face difficulties arising from geographic limitations. MQA Career Guide (2021)) also cites lack of relevant experience, and insufficient skill sets among potential candidates as other causes of the challenge. Additionally, occupations such as Diesel Mechanics, Boilermakers, Instrumentation Mechanics, and Fitters encounter challenges due to factors such as inadequate knowledge and experience with updated technology, declining interest among learners, and low output rates at educational institutions. These reasons collectively contribute to the scarcity of professionals in these critical roles within the mining and minerals sector. In the mining and minerals sector (MMS), while certain core mining qualifications or disciplines may present physical demands that are not conducive to individuals with disabilities (PWDs), there are numerous support functions within the industry that can accommodate PWDs more effectively. These support roles offer opportunities for individuals with disabilities to contribute meaningfully to the sector. For instance, Operations Managers oversee the day-to-day operations of mining sites, a role well-suited for individuals with physical disabilities that don't impede managerial tasks.

Similarly, Research and Development Managers engage in desk-based work and collaboration, making it suitable for those with mobility or sensory impairments. Accountants, Chemical Engineers, Electrical Engineers, Geologists, and other positions also offer opportunities depending on the nature of the disability and accommodations provided. For example, Mechanical Engineers may focus on designing and maintaining

machinery with necessary accommodations, while Occupational Health and Safety Advisors can contribute valuable insights into creating inclusive safety protocols. Surveyors, too, may find opportunities based on the nature of their disability and workplace accessibility, (MQA Career Guide, 2021).

1.4 Research Objectives

The objectives of the research are:

- To understand the nature of employment profiles in relation to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs;
- Identify the factors influencing the attraction of employees with disabilities in MMS;
- To realise training interventions that are put in place in the MMS to enable employment of PWDs;
- To recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS and with specific consideration to important skills supply and demand with changing technology.

1.5 Significance of the Study

This study is paramount in addressing the persistent challenges faced by the Minerals and Mining Sector (MMS) in achieving equity targets for individuals with disabilities. Despite the introduction of the National Strategic Framework on Reasonable Accommodation for Persons with Disabilities in 2021, aimed at providing tools for companies within the mining and minerals sector to facilitate the integration of people with disabilities in the workplace, the sector continues to struggle in meeting its obligations (Department of Women, Youth, Persons with Disabilities, 2021).

The study further contributes to the ongoing efforts or interventions to increase the levels of participation of the people with disabilities in the MMS. The findings and recommendations serve as a valuable resource for the internal stakeholders, within the MQA and beyond, policymakers and practitioners, institutions in the Post Schooling Education and Training Sector (PSET), and stakeholders involved in skills development in the country. In addition, the research outputs and/ recommendations inform future related studies within the sector and for reference purposes by other related sectors.

Furthermore, the study provides recommendations for possible interventions by the MQA to assist organisations in the MMS to achieve the targets with regards to employees with disabilities.

1.6 Summary

This introduction serves as a bridge between the initial contextualisation of the topic and the subsequent chapters of the study. It typically involves summarising key points, highlighting the rationale for the research, and setting the stage for the methodology and main findings. The main points covered in this chapters are the background to the project, research objectives and the significance of the study. The study further aims to address the gaps in literature associated with attraction of people with disabilities, as indicated is the subsequent chapters. These are associated with social, personal and organisational barriers on the attainment of PWDs employment targets in the MMS. It is further noted that this kind of research contributes into the broader academic and practical context and help in shedding light on the barriers affecting the attraction of PWDs.

In the following chapter, this research introduces the research design, methods, and data collection procedures. This will assist the MQA and the Mining and Minerals sector in understanding the factors impeding attainment of equity targets with respect to people with disabilities in the mining and minerals sector.

CHAPTER TWO: RESEARCH METHODOLOGY

2.1 Introduction

Research methodology is said to have many dimensions, and in this study, it is aimed at establishing 1) why a research study has to be undertaken; 2) how the research problem will be defined; 3) in what way and why the research questions will be formulated; 4) what data will be collected; 5) what particular method will be adopted; and 6) why a particular technique of analysing data has to be used (Neuman, 2011). In this instance, the research methodology chapter focuses on unpacking the research onion of Saunders *et al.* (2017), as explained below.

This chapter further includes the sampling approach, data analysis, trustworthiness, and ethical considerations. In this study, a systematic design that is meant to ensure that valid and reliable results are addressed was used, i.e., the research onion. The study addressed the factors impeding the attainment of equity targets concerning People with Disabilities (PWDs) in the Mining and Minerals Sector. The research methodology is a crucial component of this research study, it provides a framework for the investigation and ensuring that the research is conducted systematically and rigorously. The following section delves more on the paradigm perspective and the components of the research onion.

2.2 The paradigm perspective and research methodology

This research considered elements that were indicated in the research onion by Saunders (2017). Figure 1 below shows the elements of the research onion.

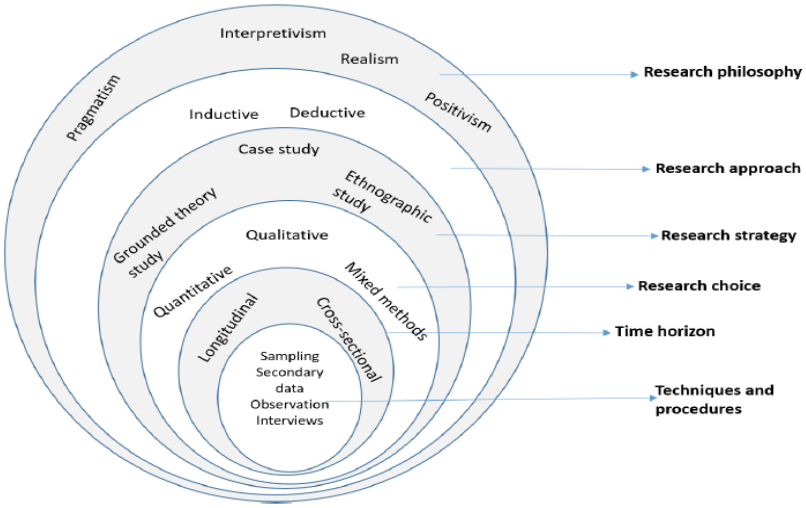


Figure 2.1: Research onion (Saunders et al., 2017)

The research onion is further unpacked below, the approach followed in this study is also elaborated on.

On the research philosophy, the study followed the Interpretivist approach. This is due to its value-bound approach, in which researchers are deemed to be part of the research. The study further adopted the inductive research approach as this is aligned with the qualitative research method. Qualitative research is easier to understand and captures rich and necessary data because personal experiences and perceptions played a huge part in it. Multiple cases were used where individual case studies formed the body of the research. The intention of this study intention was to collect data from many different individuals at a single point in time i.e., cross sectional, as opposed to a longitudinal time horizon, where the period may range from as short as a few weeks to as long as several decades. Documents reviews, semi-structured interviews, and FGDs were conducted. Documents such as organisational policies, reports, frameworks, and legislation were analysed. In relation to data analysis, thematic method analysis was used, where the researchers read through set of data and searched for patterns and the meaning of the data to find themes.

This study followed the Interpretivism philosophy, which emphasises the importance of understanding individuals' lived experiences considering reality being constructed and subjective. In-depth interviews and written narratives are used to explore and understand

individuals' experiences and perceptions. In-depth interviews and written narratives were used to explore and understand individuals' experiences and perceptions. The study conducted thematic analysis of the interview transcripts and document data, looking for patterns and themes, and generating new and unanticipated insights. Interpretation of data will include understanding how participants experience and make sense of key themes derived from the objectives. After conducting interviews, the researcher transcribed and analysed the data to identify recurring themes, patterns, and meanings. The results are presented in a narrative format with rich descriptions of the themes and sub-themes that emerged from the analysis.

2.3 Research design

The approach that was adopted for this study was qualitative research because it is exploratory, in this case, a deep understanding was required for a study of this nature, and an interactive approach to research design was recommended to explore prevailing opinions on equity targets within the MMS. Research design ensures that the data obtained assists in answering research questions more effectively (Jon, 2021). The qualitative research approach formed the basis of this study, as the focus is on collecting and analysing words (written or spoken) and textual data. The study also adopted the interactive model of research design as depicted in Figure 2.2, and this assisted in helping components to work seamlessly together and promote efficiency. This model is derived from Maxwell (2018).

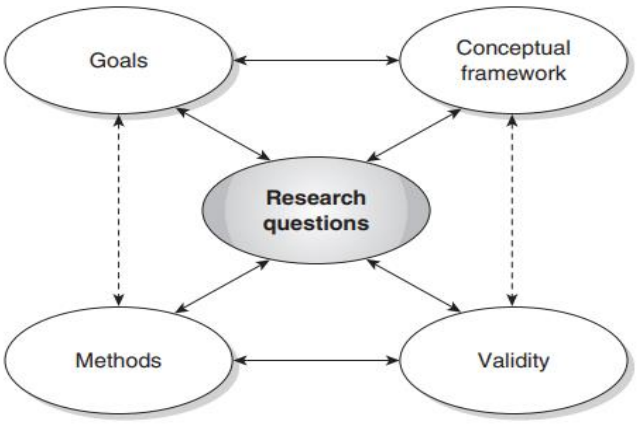


Figure 2.2 An Interactive model to research design

The upper triangle of this model is a closely integrated unit. Meaning, the research questions have a clear relationship to the goals of the study and are informed by what is already known about the phenomena being studied and the theoretical concepts and models that are applied to these phenomena. In addition, the goals of the study are informed by the current theory and knowledge, while the decisions about what theory and knowledge are relevant depend on the goals and questions. The research team has ensured these connections, during the process.

2.4 Sampling methods used.

There are various sampling methods that the study used derived from non-probability sampling, which is a method of selecting units from a population using a subjective (i.e. non-random) method. It gives all elements in the universe a chance to be included in the study sample.

This study used the following sampling methods:

- Systematic sampling, where every nth individual or element is selected from a list after an initial random start. (Boomer, Werner and Brantley, 2000). This was subsequently substituted by snowball sampling, due to the limited number of PWDs in the mining companies and also poor response rate.
- Purposive sampling, where a sample is selected based on specific criteria or characteristics related to the research objectives.
- Snowball Sampling, where initial participants referred other participants who fit the criteria.
- Quota Sampling, where the researcher selects a specific number or quota of participants from different subgroups to ensure representation but without random selection.

The researchers needed to consider the following when they decided on the sample size:

- *Population Characteristics:* The size, diversity, and homogeneity of the population.
- *Research Objectives:* The precision needed, the level of representation required, and the resources available;
- *Feasibility:* The practicality and accessibility of the population and resources for sampling;

- *Validity:* The extent to which the sample accurately represents the population; and
- *Reliability:* The consistency and replicability of the sampling method (see trustworthiness).
-

2.4.1 Purposive Sampling for Minerals council and Department of Minerals Resources and Energy

The research team adopted purposeful sampling to help them identify and select the rich information for effective use and directed focus. This sampling involves selecting a group of people or individuals who are well-experienced and have vast knowledge of a phenomenon of interest (Haute, 2021). In addition to knowledge and experience, Morse (2018) states that the importance of availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner. For better alignment with the objectives of the study, purposive sampling was used to recruit participants from the Department of Minerals Resources and Energy and Minerals Council. The CEO of the entity was the one who selected the relevant senior management based on the objectives of the study.

2.4.2 Systematic Simple random sampling for members of the organised labour

A systematic simple random sampling involves three steps: (1) computing the sampling interval, say p, which equals the population size divided by the desired sample size; (2) randomly selecting an element from the sampling frame between 1 and p, denote this ask; and (3) including all elements k+p, k+2 in the sample. To illustrate, let population size N be 90 and sample size n be 6. The sampling interval is 15 (Pan & Kupper, 2019). In this instance, if the number of union reps is 100 and the sample size is 2, the sampling interval is 50, therefore the researcher would select the 50th and the 100th. In this regard, a database was an important tool that listed the unions operating in the space. Out of the total number, two were selected using the systematic simple random sampling approach. In those two, a request for the representative was made to the Head office of the union.

2.4.3 Quota Sampling for Employees with Disabilities (PWD)

Focus group discussions were organised with PWDs and there was a total of 18 FGDs, two in each sub-sector and with six participants each. Quota sampling was conducted to select the representative sample in this regard. For example, the quotas were based on population proportions. The following inclusion criteria were implemented.

Quota sampling plan used for PWDs:

- Step 1: Number of years of service (50% each) – this was to balance the longest serving and the recent appointments;
- Step 2: Once the years of service were determined and selected, occupation/s (the focus group reflected a representation across occupational categories);
- Step 3: The sampling tried as much as possible to ensuring that the gender balance (50/50); and
- Step 4: Ensuring that all types of disabilities are accommodated.

2.4.4 Quota Sampling for HR Experts

The 8 HR experts were selected based on their knowledge and their roles as custodians of Human Resources and skills development policies, procedures, and practices. This includes Skills Development Facilitators/ HR Managers/ HRD Managers / Practitioners. The criteria used in quota sampling includes the following:

- To understand the nature of the employment profile with respect to provincial, sub-sectoral, racial, gender, age and occupational distribution of PWDs;
- To identify factors influencing the attraction of employees with disabilities in the MMS; and
- To identify factors influencing the retention of employees with disabilities in the MMS

2.4.5 Quota Sampling for Senior Managers/ Managers in the sub-sectors

8 Senior Managers were selected based on the length of service and most employees with disabilities amongst others. The following quota sampling approach was used:

- Step 1: Sub-sector with most people with disabilities
- Step 2: Senior manager with most people with disabilities
- Step 3: Length of service (longest serving senior managers)

Whilst the above was the ideal wish, it is noteworthy that results obtained from 60% of the sample, can be used to draw conclusion and form basis for recommendations, Kelly (2011). Generally, the choice of sampling method depends on the research objectives, the nature of the population, resource constraints, and the desired level of precision and these were considered by the research team. In this study, proper sampling was essential to ensure that the findings of this study are applicable and generalisable to the broader population from which the sample is drawn.

2.5 Data collection

The following instruments were used for data collection:

2.5.1 In-Depth Interviews (IDIs)

The in-depth interviews were held with key stakeholders and experts to shed light on the nature of the employment profiles concerning provincial, sub-sectoral, racial, gender, age occupational distribution, and the factors influencing the attraction of PWDs in the MMS. The in-depth interviews included Labour unions, Senior Management in the Department of Minerals and Energy, Minerals Council, and the respective Employers in the MQA sector. The interviews were held virtually through Zoom and Microsoft Teams and a total of 20 interviews was targeted. Out of 20 targeted participants in IDIs, 14 were interviewed. All the mentioned participants were selected based on the insight they had on the barriers affecting PWDs. The IDIs across these categories aimed at:

- Identifying the factors influencing the attraction of employees with disabilities in MMS;
- To identify factors influencing the retention of employees with disabilities in MMS;
- Recommending strategies that can be put in place to improve absorption; and
- To understand the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs.

2.5.2 Focus Group Discussion (FGD) Guides

The purpose of FGDs was to enable rich discussion, collecting rich detail and deeper levels of information through conducting interviews with a small group of people. Participants were PWDs because they understood the factors that influence and attract

employees with disabilities in the MMS which is key. The focus group discussion aimed at identifying the factors influencing the attraction of employees with disabilities in MMS and to recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS. One (1) FGD has been completed and forms part of the report. In this regard the intended FGD was 18. In this regard, and due to the highlighted limitations, more PWDs were added under IDIs, and their responses were incorporated.

2.5.3 Documents review/ analysis

The research team was able to gather all the information from policy documents, existing Employment Equity reports, Annual reports, Training plans, Training reports, Sector skills plans/reports, and previous survey reports amongst others. With these documents, the aim was to:

- Understand the nature of employment the profile concerning provincial, sub-sectoral, racial, gender, age and occupational distribution of PWDs; and
- Realise the training interventions that are put in place by the MMS to enable the employment of PWDs.

2.6 Administration of data collection process

- Recording of sessions and transcripts

Consent was sought from participants at the recruiting stage to record the interviews. All sessions were recorded on audio. For the completed sessions, the audio recordings were tested for audibility and completeness. Back-up devices were provided in the event of unforeseen technical failures.

- Quality Control

As a full corporate member, TRS fully subscribes to Southern African Marketing Research Association (SAMRA) Code of Conduct regarding data integrity checks and ethical conduct.

The following steps were critical in ensuring data quality control:

Selection of suitably qualified team members: The project was resourced with a qualified and experienced team. The field team is multilingual and were able to interview respondents in their preferred language. Before the interview, interviewers were matched according to the language preference of the respondent. Field material such as the recruitment questionnaires and discussion guides were designed in such a way that the team would not face challenges when administering the data collection process.

It is the policy of TRS to ensure quality checking of reports through an internal dry run before final presentation of results, and proof reading of reports and transcripts by a professional language editor.

- Data Storage

During this research project, the project members were responsible for the maintenance, safe storage, and processing of the data. This refers to information security, which is the systematic safeguarding of information in a manner that keeps the information available while preventing easy access and misuse. At TRS there is an internal server which allows project teams to save and access documents. This is a secure portal for TRS documents and client documents. All project documents are saved on that portal and only TRS designated staff have access to the server/portal. Client documents shall be kept for a maximum of three years and be made accessible to MQA upon request. Post completion of the project, the database will be deleted on staff's electronic gadgets and only be kept on the server.

Additionally, the following storage measures were applied:

- Project team signed confidentiality agreement.
- Password encrypted documents were produced for data analysis and reporting; and
- Data storage allowed TRS to keep digital information in such a way that it can be retrieved in future.

2.7 Data analysis

The qualitative data collected from the data collection instruments shall be analysed using thematic analysis. As an inductive analysis method, thematic analysis is about generating themes based on the raw data, which supports the research objective of developing a theory based on the research findings (Kumar, 2019). In this approach, the researchers embarked on reading through a set of data and looking for patterns in the meaning of the data to find themes. Steps involved in this study include familiarisation with the data, searching for themes, reviewing the themes, writing the narrative, quality checking and report writing.

2.8 Trustworthiness

The term trustworthiness relates to the integrity, originality, and honesty of qualitative study results (Tracy, 2020). It refers to readers' faith or assurance in the outcome (Tracy, 2020). The following section is an indication of how TRS will ensure the degree of confidence in data, interpretation, and methods used to ensure the quality of a study:

Credibility - In qualitative research methods, data must be trustworthy and believable for it to comply with credibility requirements. Creditability also ensures that the research study's findings are not far from the current reality in the field under study (Babbie and Mouton, 2001). However, enforcement of credibility does not mean that all respondents should respond the same way or belong to the same social construct (Babbie and Mouton, 2001). To improve/ increase the credibility of this study, the researcher used triangulation of data collection instruments, prolonged engagement with data, persistent observation, member checks, and referential adequacy. Notwithstanding the above, utilising multiple sources and methods of data collection helps to triangulate and validate the data, reducing bias and error.

Transferability - Generalisation or transferability of research findings indicates that a researcher can extend the account of a specific population and situation to those not directly studied (Babbie and Mouton, 2001). The researcher utilised thick description, which provides adequate details on the site, participants, methods or procedures used to collect data during the study, and how these can be applied to other studies or contexts.

Dependability - Data collected using qualitative methods is expected to be reliable, yield the same results under similar situations, and therefore conform to dependability requirements (Mehta, 2014). Furthermore, dependability refers to a situation where findings can be replicated using the same respondents in a similar situation, thereby emphasising the importance of changing some circumstances and contexts that are consistent for research outcomes (Mehta, 2014). The researcher ensured dependability by providing a detailed description of the research methods.

Confirmability - Findings are also expected to be confirmable in the sense that other researchers can also confirm or collaborate with the findings of the study, therefore eliminating the element of bias (Tracy, 2020). To ensure that there is confirmability of findings, the study was subjected to a peer-review mechanism, where researchers in the same field reviewed the findings to ensure its confirmability. In this regard, all sources of data shall be archived in an easily retrievable storage system in case findings are challenged.

2.9 Ethical considerations

Mehta (2014) characterised ethical considerations in research as a set of principles guiding research designs and practices, applying ethical concepts such as respect for privacy, voluntary participation, informed consent, and cost-benefit analysis to everyone involved in information gathering. The following ethical principles were adhered to within the study:

i) **Ensuring participants had given informed consent**. According to Neuman (2011), the entire informed consent process involves providing subjects with adequate information concerning the study and obtaining permission to conduct the study from the participants. Informed consent within this study was ensured by sending an informed consent form and information sheet to the participants informing them about the study's purpose and asking them to partake in it.

ii) **Ensuring no harm came to participants**. Ensuring no harm, also termed beneficence, means that the welfare of the participants should be protected during the study by not harming them physically, psychologically, or emotionally (Jansen, Dereck, and Kerryn, 2020). Since this study involved Persons with Disabilities (PWDs), care was taken to ensure no harm was caused to the participants by not

physically handling them and avoiding asking personal questions that could inflict psychological or emotional harm.

iii) **Ensuring confidentiality and anonymity**. Excluding or changing any personal, identifiable data given by respondents from the data was referred to as guaranteeing confidentiality and anonymity (Neuman, 2011). Confidentiality and anonymity were ensured in the study by not asking participants for their personal information, such as name, address, and identification.

iv) **Ensuring that permission was obtained.** TRS was appointed to conduct this study, and permission was sought from the respective Mining Companies as well as other relevant stakeholders to give a comprehensive view of the mining sector in relation to equity targets for people with disabilities. Additionally, TRS applied acceptable standards of ethical research by ensuring that the research was conducted in an honest and ethical manner, reporting findings that were truthful and accurate, and avoiding plagiarism.

2.10 Summary

This chapter provides an overview of the research design and emphasises the roadmap that was used to undertake this study. Whilst this is an exploratory qualitative study, an inductive approach was used to develop theories or generalisations based on specific observations or data. The research further emphasises the study's philosophy, interpretivism, which is regarded as value bound. In this regard, one can only understand someone's reality through their experience of that reality, which may be different from another person's, shaped by the individual's historical or social perspective. As this is the study of the MMS, the researcher further elaborated on the ethical considerations that were looked at during the process, which are believed to matter for scientific integrity, human rights and dignity, and collaboration between science and society. This research highlights five chapters on which the research report is based, and these comprise of an introduction and background, literature review, theoretical and conceptual framework, research methodology, findings and recommendations.

This research methodology encompasses the overall approach, techniques, tools, and strategies employed to answer research questions or achieve research objectives. The

methodology serves as the foundation of a research study, guiding researchers in the systematic collection, analysis, and interpretation of data to address research questions and contribute to knowledge within a specific field. In this study, the employed research methodology has been useful in establishing rigour and credibility of this study, in ensuring accuracy and consistency of research findings and in guiding the researcher in conducting a research or study that is ethically sound.

CHAPTER THREE: LITERATURE REVIEW, THEORETICAL AND CONCEPTUAL FRAMEWORK

3.1 Introduction

The overall objective of this chapter is to first outline the content covering existing research, theories, and evidence in this or a similar field of study. In this regard, this relates to the literature on the social, personal and organisational barriers to the attainment of employment targets for people with disabilities in the MMS. Secondly, this chapter provides the critical evaluation and analysis of the reviewed literature. Of most importance to the researcher is (a) identifying what has been written on a subject or topic and (b) determining the extent to which this specific research area reveals any interpretable trends or patterns.

The heart of this research lies in the comprehensive exploration of factors contributing to the persistent underrepresentation of individuals with disabilities in the South African mining sector. The literature review endeavours to construct a robust theoretical, empirical, and conceptual framework, forming the bedrock finding the gaps in literature.

The theoretical framework will delve into existing theories elucidating the multifaceted factors influencing the employment of individuals with disabilities. Simultaneously, the empirical literature will scrutinise relevant studies that have probed the determinants of employment for persons with disabilities. Finally, the conceptual framework will offer a systematic analysis, delineating the intricate relationships uncovered during this study. By synthesising these perspectives, this research aspires to not only diagnose the challenges but also prescribe effective solutions for fostering inclusivity and equitable opportunities within the Mineral and Mining Sector in South Africa.

3.2 Empirical literature review

This section presents the empirical literature which highlights the findings from studies that have investigated the factors that determine the employment of PWDs in the mining sector and related sectors such as construction. Despite the existence of policies aimed at promoting workforce diversity, individuals with disabilities still encounter a significant

challenge when it comes to getting employment (Ebrahim *et al*., 2022). The factors that impact of the employment of people with disabilities reported by studies in literature can be grouped into the following: (1) social and cultural factors, (2) organisational factors and (3) personal factors.

3.2.1 Social and cultural factors

Social factors are related to human society and govern interactions between individuals. These include social stigma/biases, stereotypes, discrimination, or attitudinal factors (Gravelle, et al., 2023). The mining industry has traditionally been a male-dominated sector, and the promotion of diversity within it faces significant challenges due to the inherent complexities and multi-level issues encompassing cultural and institutional heterogeneity. Disability inclusion is often neglected in the broader diversity efforts, resulting in negative hiring practices (Bonaccio et al., 2019). This challenge becomes even more significant in the historically male-dominated mining domain, where the dimensions of diversity and the extent to which companies genuinely prioritise, diversity seem to vary based on the industry's organisational landscape. The mining industry has notably remained behind other industries such as agriculture, manufacturing, and those in the tertiary sector, in effectively promoting diversity at a global scale (Sasikala & Sankaranarayanan, 2022).

Societal biases and stigmas related to disabilities can significantly influence how employers perceive the abilities and potential of individuals with disabilities. These biases can potentially impact hiring decisions, resulting in discriminatory practices (Maja et al., 2011). Grinker (2021) conceptualises stigma as the result of the interaction between labelling, stereotyping, separation, and discrimination by community members who hold superior positions in terms of social, political, and economic power. Discrimination remains a significant obstacle to the absorption of PWDs into mainstream employment. Koodibetse (2015) found that despite widespread campaigns, the persistence of stigma and discrimination against PWDs remains prevalent. Disability-based stigma and discrimination are global issues.

According to Parker and Aggleton (2003), disability-based stigma and discrimination are global issues that transcend geographical, cultural, and socioeconomic boundaries. They

are cross-cultural phenomenon as stereotypes about disability exist in various cultures, perpetuating misconceptions, and negative attitudes. These stereotypes contribute to the stigmatisation of individuals with disabilities globally (Pelleboer-Gunnink et al., 2021). Discrimination in the workplace based on disability is a global issue as barriers to employment opportunities, lack of reasonable accommodations, and negative attitudes from employers are challenges faced by individuals with disabilities worldwide (Lewis-Brown, & Batty, 2021). People with disabilities experience social exclusion and isolation regardless of their geographical location. Discrimination can lead to a lack of social integration, limiting individuals with disabilities in their ability to participate fully in community life (Van Brakel, et al., 2012).

The literature highlights numerous stereotypes that surround individuals with disabilities, particularly in industries such as mining and construction. Stereotypes surrounding individuals with disabilities, particularly in industries like mining and construction, include perceptions of disabled people as inconvenient workers, dependents, having physical limitations, having less productivity and efficiency, posing safety risks in hazardous work environments, and lacking attractiveness as workers (Burzotta, & Bertolino, 2023). These stereotypes hinder the employment of people with disabilities and create barriers to their inclusion in the workforce (Naberushkina, et al., 2021 and Bailey et al., 2022). These stereotypes often stem from misconceptions and biases and can adversely affect the employment prospects of individuals with disabilities (Markel & Barclay, 2009). Negative stereotypes include viewing individuals with disabilities as inconvenient or dependent workers, while employers also struggle with a sense of social responsibility and an obligation to hire people with disabilities (Naberushkina et al., 2021). This is also supported by the study done by Van Niekerk & Van der Merwe (2013) that potential employers might wrongly assume that individuals with disabilities are inherently incompetent, believing that no one would want to employ someone who is considered permanently incompetent. This was also supported by Savtschenko (2002), who said that people with disabilities usually face discrimination, being perceived as incompetent and attributing specific negative characteristics to disabled individuals.

This negative attitude has led potential employers to focus on the functions individuals with disabilities cannot perform while making hiring decisions, effectively closing off possibilities for them. Other studies, like Kaye et al. (2011) and Martz (2007), found that

a number of employers have negative attitudes toward employees with disabilities. There is a prevailing stereotype that individuals with disabilities cannot perform on par with their able-bodied counterparts, and employers may express concerns about the need for extra supervision when working with disabled employees compared to their non-disabled peers (Bennett, 2022). This stereotype often results from recruiters' limited exposure to individuals with disabilities, and employers worry that the presence of a disabled person might negatively affect the attitudes of their co-workers, potentially creating a sense of inequality in the workplace that could impact productivity.

Bailey et al. (2022) highlighted that stigma, and attitudinal barriers significantly impact the employability of people with disabilities. Individuals with disabilities experience stigma and attitudinal barriers, and they can act as direct or indirect obstacles to employment. These barriers manifest in various ways and influence the hiring process by instilling a sense of risk, fear, unpredictability, and behaviours that hinder the hiring of people with disabilities (Bailey et al., 2022). Among the attitudinal barriers are perceptions, assumptions, attitudes, and beliefs that individuals with disabilities cannot work long hours, will increase the cost of supervision, and will have health needs that could negatively affect productivity and result in higher rates of absenteeism. Contrary to a study conducted in Brazil by Guimaraes et al. (2018), which compared the levels of absenteeism between people with disabilities and those without disabilities, found no significantly higher rate of absenteeism.

In conducting research involving Australian construction subcontractors, Loosemore et al. (2019) identified several barriers to building a diverse and inclusive workforce. One of the main barriers was the perception among employers that marginalised groups, including people with disabilities, were seen as a risk, incapable of fitting in, and unable to work effectively in the construction industry. The study emphasises that people with disabilities faced the third highest level of barriers among the six compared groups, which included women, refugees and migrants, Indigenous people, ex-offenders, and disengaged youth.

Discrimination against people with disabilities results from negative attitudes, lack of knowledge, and awareness. This often arises from prejudiced attitudes, but it is often insufficient information, rather than prejudice itself, that poses a significant to eradicating

discrimination in the employment of people with disabilities (Blanck, *et al*., 2023). These perceptions can foster discrimination in the workplace, contributing to unemployment and unfavourable working conditions for people with disabilities (Maja *et al*., 2011). Kaye *et al*. (2011) found that employers have shown concerns about their lack of concrete knowledge on how to accommodate employees with disabilities. They fear that such accommodations may burden managers as they must acquire barrier knowledge about various disabilities and the associated legal regulations. This additional burden is viewed as potentially affecting overall staff productivity, and employers worry about being stuck with employees who cannot be disciplined or terminated due to potential legal issues in both labour and disability employment law. This anxiety stems from the stereotype that any mistake could lead to legal action and the belief that individuals with disabilities might take advantage of their disability to avoid consequences (Bezyak, et al., 2021). Legal disputes can lead to negative publicity and escalating legal costs. Another challenge mentioned in the literature is the difficulty employers face in accurately assessing an applicant's ability or inability to perform specific tasks outlined in the job description (Gida and Ortlepp, 2007). Furthermore, other studies indicated that employers frequently lack accurate information about the productivity of individuals with disabilities, and perceptions are often formed with limited objective knowledge (Burke et al., 2013 and Lengnick-Hall et al., 2008).

A study conducted by Baffoe in 2013 applied the stigma model to analyse its impact on Ghanaian society, focusing on factors such as societal attitudes and perceptions influencing views on individuals with disabilities. The findings emphasised the significant issue of stigmatisation of PWDs in Ghana, defining stigma as the primary barrier hindering them from leading "normal" and productive lives. Stigma manifests through negative labelling, rooted in factors like superstition, ignorance, lack of empathy, old belief systems, and a tendency to fear and exclude those perceived as different. Discrimination, the mistreatment of PWDs due to stigma, was highlighted by participants in the study. This discrimination often leads to societal exclusion, bullying, aggression, ridicule, and a devaluation of the individual's self-worth. Consequently, PWDs face challenges in obtaining housing, securing regular employment, accessing education, forming meaningful relationships, and enjoying a quality of life equal to other citizens.

3.2.2 Organisational factors

Organisational factors refer to internal characteristics of an organisation that impact on its functioning and performance of PWDs (Okigbo, et al., 2023). The physical environment, encompassing factors like infrastructure, equipment, and machinery, has been identified as a significant barrier to the employment of people with disabilities (Fortune, et al., 2022). Individuals with disabilities encounter various obstacles when entering the workforce, which can hinder their integration into the work environment. Martz (2007) identified the most reported barriers as physical obstacles, attitudinal barriers, a lack of necessary facilities, and policy-related barriers. Some of the challenges noted include the inability of people with disabilities to access workplaces due to insufficient parking facilities and inaccessible public transport, inaccessibility of buildings and infrastructure as physical barriers to employing individuals with disabilities (La Grow & Daye, 2005 & Wordsworth, 2003). South African studies have supported these findings. A study by Gida & Ortlepp (2007) investigated human resource management practices through interviews of 19 respondents from different organisations identified in the Financial Mail's 'Top 100 organisations in South Africa's list. The participants in the study pointed out that inaccessible facilities and public transport were hindrances to hiring people with disabilities.

Charles et al., (2023), examined the barriers to employment faced by PWDs in the South African public service by interviewing 10 managers in different organisations. The study concluded that infrastructural, organisational, managerial, and psychosocial factors are the major barriers to employment of PWDs. Respondents suggested that there is reluctance by managers to employ PWDs which explains the low absorption of PWDs into mainstream employment. Some managers reported that lack of access to job information was a major barrier to employment of PWDs, which can be explained by low response rate in terms of applications for vacancies.

According to Oskouie et al. (2017), negative stereotypes and stigmatisation of individuals with disabilities can persist in specific workplaces, making it challenging for these individuals to be entirely accepted and be provided with equal opportunities or considered for employment. While not all disability stereotypes are uniformly negative, some are uncertain, encompassing perceptions of individuals with disabilities as passive,

incompetent, dependent, and unproductive, as indicated by Nario-Redmond (2010) and Rohmer & Louvet (2012). Stereotypes and misconceptions about employees with disabilities persist in the corporate environment, influencing corporate behaviour. These biases can become deep-rooted in a company's culture and manifest in everyday practices (Levitt and March 1988). Corporate culture is formed through the organisation's collective experiences, which evolve into standard procedures.

These cultures, in turn, shape, and influence employers' intentions, attitudes, and actions in various situations, such as when hiring or managing employees with disabilities (Samant et al., 2009). Breward (2017) investigated the individual, organisational and institutional factors that determine employer accommodation of PWDs using a Canadian survey of 5418 individuals. The author found that the individual factors such as stereotyping, and the stigmatisation of particular disability types was the major contributor to lack of accommodation of people with PWDs. Institutional factors such as legislation and union protection do not have the desired effect of promoting accommodation of PWDs.

Bailey et al., (2022) highlighted types of accommodation for people with different types of disability working in different construction site roles and the relevant legal requirement to offer and implement reasonable accommodations in the workplace to enable the employment of people with disabilities and provide them with equal opportunities. Similarly, Bruyere (2000) found that the most pressing concerns for employers are related to reasonable workplace accommodation, particularly the cost and knowledge of how to provide such accommodation for people with disabilities. Kaye et al., (2011) found that employers indicated that the cost of accommodations was an obstacle to employing individuals with disabilities and a lack of awareness about how to meet the needs of disabled workers as a reason for not hiring or retaining them.

Fraser et al., (2010) investigated hiring intentions of employers regarding PWDs using three semi-structured focus groups with key hiring decision makers, such as Human Resources directors, Chief Operating Officers (COOs), or Chief Executive Officers (CEOs) of small, medium, and large Seattle area companies in the United States. The study concluded that educational and marketing interventions be introduced to improve employers' attitudes toward hiring and retaining individuals with disabilities.

Gewurtz et al., 2016 also highlighted the frequent lack of knowledge among employers about the requirement to provide reasonable accommodations and their misconception that accommodations are often costly. The research further identified the belief of some employers that providing accommodations for the hiring process, or the workplace could create financial burdens and legal risks. This perspective often arises from a combination of misconceptions, lack of awareness, and fear of potential consequences. Employers may worry that implementing accommodations, such as accessible facilities or specialised equipment, could incur additional costs.

This concern is rooted in the misconception that adjusting to accommodate employees with disabilities is always an expensive endeavour (Schwab, & Willborn, 2002). Employers may be apprehensive about potential legal ramifications associated with providing accommodations. This fear is often fuelled by a lack of understanding of relevant disability rights legislation and a perception that any misstep could lead to litigation. Some employers might lack knowledge about the diverse range of accommodations available or may not be aware of how reasonable and feasible these adjustments can be. Unfamiliarity with the concept of reasonable accommodations may lead to a perception that all accommodations are cumbersome or financially burdensome.

Kaye (2011) has shed light on various reasons behind employers' reluctance to hire people with disabilities. A significant concern revolves around the high associated costs of employing people with disabilities. Employers often fear that providing "reasonable accommodation" would be prohibitively expensive and necessitate extensive changes to their existing work environments, which could impact their bottom line. Darcy et al. (2016) explored disability employment practices through human rights complaint cases and discovered that inaccessible infrastructure, facilities such as buildings and equipment, and transportation options pose considerable barriers for individuals with disabilities. In many instances, mines and worksites lack wheelchair accessibility or necessary accommodations such as ramps or elevators.

These barriers include hurdles in the hiring process, misconceptions about the cost of reasonable accommodations, and direct and indirect discrimination. The physical aspects, particularly in physically demanding environments like construction, are

significant obstacles for people with disabilities. The lack of transportation facilities and the unaffordable costs of specialised transport significantly contribute not only to the unemployment of people with disabilities but also to their limited participation in society at large (Banerjee, 2008; Schmidt & Smith, 2007). Literature has highlighted that employing people with disabilities is regarded as a burden, and in some instances, they are hired with reservations (Bailey et al., 2022). However, as pointed out by Hartnett et al. (2011), employers stand to benefit when they are willing to make a reasonable accommodation for employees with disabilities. Morwane et al. (2021) identify several barriers to employing people with disabilities related to bodily functions, structural limitations, difficulties in performing certain activities, and contextual factors in the work environment.

The chances of securing employment for individuals with disabilities are influenced by the nature and extent of their disability, as well as employers' inclinations towards hiring them. In the research we conducted, employers turned down candidates with physical disabilities, citing workspaces that were not accessible. Companies interviewed revealed that their work environments were unsuitable for individuals with physical disabilities due to demanding levels of mobility and stamina required for the roles. The research emphasises the significant role of the work environment in reinforcing the concept of disability and its impact on the limited employability of individuals with disabilities. Maja et al. (2011) explored the employability of people with disabilities and found that industrial settings have refrained from hiring people with disabilities due to the inaccessibility of their buildings and infrastructure. Therefore, the suitability of the physical environment significantly impacts the employability of people with disabilities. Maja et al. (2011) argue that the physical environment, encompassing equipment, infrastructure, and machinery, imposes constraints on the employment of individuals with disabilities. Adapting to this environment may be perceived as costly or complex by employers and demands a high level of commitment. For instance, technological advancements within the Fourth Industrial Revolution (4IR) have enabled the development of assistive devices and technologies capable of creating an inclusive environment for the employment of people with disabilities (Mji & Edusei, 2019).

A study by Sundar and Brucker (2018) investigated factors influencing job satisfaction, which is an indicator of productivity, job retention, and absenteeism, specifically for

workers with disabilities. Using data from the 2015 Kessler Foundation National Employment and Disability Survey, the study investigates how personal and organisational factors impact job satisfaction. Results reveal that educational attainment, perceived pay discrepancies, and supervisor attitudes play a significant role in job satisfaction for workers with disabilities, while coworker attitudes do not have an impact (Sundar and Brucker, 2018).

Kaye et al. (2011) highlighted that the South African barriers to employing people with disabilities into mainstream employment seem closely tied to developmental challenges. South Africa's history of apartheid has left a lasting impact on the social and economic landscape. Historically, individuals with disabilities were marginalised and excluded, and overcoming these deep-seated prejudices is an ongoing challenge (Republic of South Africa, 2016). Furthermore, South Africa grapples with economic inequality, and individuals with disabilities often face additional financial hardships. The lack of economic resources can impact access to assistive devices, transportation, and other necessities that facilitate employment. Research indicates that stigma and discrimination remain substantial obstacles to the employment of people with disabilities in African countries compared to developed nations (Charles, et al., 2023 & Maja et al., 2011 & Marumoagae, M.C., 2012). These concerns about accommodation costs and legal liability often lead employers to avoid integrating people with disabilities or resist making reasonable accommodations.

The employment of individuals with disabilities in physically demanding fields such as mining and construction raises substantial concerns regarding health and safety. The harsh and rugged working conditions in the mining industry, known for their physically demanding nature, present challenges for people with disabilities in performing specific job tasks (Robinson et al., 2023). This is evident in the study conducted by Moraka and Rensburg (2015), where they assessed the transformation efforts within the South African mining industry. The findings revealed that the mining sector's slow pace of transformation with regard to employment of PWDs, can be attributed to the demanding and hazardous working conditions. Likewise, the construction industry, characterised by physically demanding work conducted outdoors under conditions often unfavourable to safety and health, introduces further complications (Kamali, 2013).

A study by Pujianti and Djunaidi (2022), which assessed the physical work environment of miners in Kutai Kartanegara, East Kalimantan, highlighted that mining entails significant health and safety risks. Factors related to the physical work environment encompass all elements in the workplace that can directly or indirectly affect workers, and safety conditions are not always under control. Wordsworth (2003) emphasised that certain disabilities are particularly high-risk in specific work environments, leading to employer reluctance in hiring such individuals. Safety concerns arise from the inherent lack of control over hazardous working conditions. Some have suggested that people with disabilities are better suited for less physically demanding and non-hazardous work environments, which is supported by a study conducted by Jollie et al. (2019) who examine the factors affecting employability of PWDs and found lack of self-esteem and negative attitudes compounded by discrimination and possible bullying of colleagues aggravates the problem. Setume (2016) found that employers generally prefer individuals with disabilities for roles that require soft skills and office-related tasks.

The mining and construction industries remains behind in promoting diversity, especially employing people with disabilities (McKinsey and Co., 2021). These industries often foster highly competitive and masculine cultures, which may not be conducive to fostering inclusivity and diversity (McKinsey and Co., 2021). Individuals with disabilities may feel marginalised or unwelcome in such environments. The construction industry, for instance, has a predominantly negative image when it comes to accommodating individuals with disabilities, potentially limiting their inclusion (Sangweni, 2015). Edmonds et al. (2021) indicated that tougher working conditions in industries such as manufacturing industry, including construction, mining, and petroleum production, can make people with disabilities particularly vulnerable as safety concerns become dominant.

These industries are associated with high-risk environments due to hazards in the physical work environment and unsafe work processes. Pekuri (2011) found that individuals with disabilities might perceive such environments as unsuitable for their well-being and, as a result, may be discouraged from pursuing careers in these fields. Although, many countries have legal requirements aimed at promoting equal employment opportunities for individuals with disabilities, enforcement of these regulations is not always strictly enforced within specific industries. In South Africa's post-apartheid legislative structure is often regarded as forward-thinking, built upon policies aimed at

remedying historical inequalities in the nation by prioritising equity and social justice (Botha et al., 2023). However, individuals with disabilities continue to be the most marginalised group, facing adverse effects from inadequate infrastructure, deficient service delivery, and encountering difficulties in accessing and engaging in the mainstream job market.

Research conducted by Lengnick-Hall et al. (2008) revealed that employers held the misconception that individuals with disabilities are more prone to work-related accidents compared to their able-bodied counterparts. The study also debunked the myth that employing people with disabilities would lead to litigation associated with termination. Allbright (2001) noted that while the fear of litigation may influence the employment of people with disabilities to some extent, it is often exaggerated beyond justification.

A more recent study by Bonaccio et al. (2020) investigated the concerns that employers have regarding PWDs. The study showed that employers express concerns that workers with disabilities pose additional safety hazards or are more susceptible to injuries compared to their non-disabled counterparts. However, available research suggests that these concerns are generally unfounded. Workers with disabilities are not more likely to injure themselves or others than their non-disabled colleagues. One area where safety considerations might be particularly relevant is during emergency situations. Therefore, it is a prudent business practice to ensure that emergency preparedness measures consider the needs of all employees, including those with disabilities.

Hernandez, et al. (2008) suggested that potential employers often refrain from hiring people with disabilities due to the fear of a negative response from their existing able-bodied staff, which could lead to reduced productivity and higher production costs. Stone and Colella (1996) as well as Lengnick-Hall et al., (2008) identified three main reasons why some non-disabled co-workers are uncomfortable with the employment of people with disabilities: concerns that their own workload would increase to accommodate people with disabilities; misconceptions that some disabilities are contagious; negative effects on interpersonal interactions, as they are unsure how to act around people with disabilities and may experience feelings of awkwardness, discomfort, and ambivalence during their interactions.

On the other hand, a study by Alemany and Vermeulen (2023) found that Employing individuals with disabilities can provide a company with competitive advantages such as: (1) permitting companies to tap into a broader pool of talent and expertise. (2) Fostering a more collaborative and inclusive work environment which promotes open communication, diverse perspectives, and a sense of belonging among all employees, ultimately boosting productivity and innovation. (3) stronger customer relationships through a reputation for inclusivity and social responsibility resonates with customers, fostering trust and loyalty, and lastly through attracting capital and talent as investors and prospective employees are increasingly drawn to companies that demonstrate a commitment to diversity and inclusion, enhancing a company's reputation and attracting top talent.

The analysis on the organisational factors that impact on the absorption and retention of PWDs in employment highlights the needs for a change of mindset from employers regarding the accommodation of PWDs and the role they can play in an organisation. Nxumalo (2020) investigated the role of transformational leadership in promoting the inclusion of PWDs in employment. Transformational leadership can be defined as leadership that encompasses inspirational motivation, individual consideration, the ability of a leader to encourage employees to be solution driven, and the ability of a leader to create an environment that is conducive to personal development and growth of employees. 12 senior leaders from various departments in local government in KwaZulu Natal and five employees were selected for the study. The findings revealed that the senior leaders did not have a full grasp of the term disability, a finding that was corroborated by employees. Leaders seemed to have adopted the medical model of disability which emphasises impairment instead of the capabilities of a PWDs. This perpetuates the issue of unequal opportunities in the workplace for PWDs. The author concluded that the transformational leadership model should be adopted to improve disability inclusion in the workplace.

The following set of studies reviewed are phenomenological in nature, which refers to findings from the experiences of PWDs. Potgieter et al. (2016)’s study explored the challenges faced by disabled employees regarding their career development. Employing a qualitative, exploratory approach, the study involved 15 employed individuals with declared disabilities, recruited through a combination of probability, purposeful, and

snowballing sampling techniques. The findings revealed that people with disabilities often experience career advancement challenges and reach career plateaus. Managers and colleagues' lack of awareness and understanding of disability negatively impacts their career progression and human resource practices, particularly promotion procedures, can discriminate against disabled employees. Furthermore, prejudice against invisible disabilities exists, thus discouraging employees from disclosing their condition. Some disabled employees believe that they might lose their jobs if they disclosed their disability.

Mithout (2021) investigated the influence of disability on the professional advancement of qualified disabled workers in Japan, drawing upon qualitative interview data gathered within Japan. Disabled employees perceived those regular workers, who possess long-term tenure, are typically offered a career trajectory devised by the organisation, which encompasses job rotation and promotions. Conversely, disabled workers encounter greater difficulty in attaining promotions compared to their non-disabled counterparts. Within this survey, numerous respondents expressed a sense of being regarded by their supervisors as individuals who lack the capacity for growth. A subset of participants disclosed a preference for persisting in unsatisfactory employment as opposed to actively seeking more gratifying occupations in order to secure financial stability. However, other participants conveyed their decision to willingly forgo financial security in order to pursue employment that is more personally fulfilling.

Rana *et al.* (2022) utilised a qualitative research design, specifically employing a phenomenological approach, to investigate the lived experiences of individuals with physical disabilities in Nepal. A series of in-depth, face-to-face semi-structured interviews were undertaken with a total of 12 participants residing in the Kathmandu Valley. The investigation successfully identified a total of 13 prevailing themes pertaining to the employment engagement of individuals with physical disabilities within the context of Nepal. These themes were subsequently categorised into three distinct groups, namely enablers, barriers, and solutions. The enablers encompassed various factors such as early childhood education, familial support, and the existence of disability-friendly policies. Conversely, the barriers to effective employment participation included familial members exhibiting an overly protective demeanour as well as instances of discriminatory practices by employers during the recruitment process. To effectively tackle these obstacles, several solutions were proposed, which included the prioritisation

of individuals with disabilities during the recruitment process as well as implementing policies that foster an inclusive and disability-friendly environment.

Mtetwa (2018), examined the challenges that PWDs face with obtaining employment in Zimbabwe through in-depth interviews with disabled individuals. PWDs reported that lack of acceptance by mainstream society as a major cause of poverty and unemployment for persons with disabilities, particularly those with visual impairments. Other participants reported that discrimination in the workplace has hindered their promotion and career progression and not their lack of qualifications or experience. The participants suggested that to mitigate the challenges faced by PWDs, the education system should take into account their special needs and that representation of PWDs at government level was of paramount importance.

Simbaya et al. (2019) conducted a research study in which they collected biographies of individuals with disabilities in Kenya, Uganda, and Sierra Leone who have attained economic prosperity in their lives. The authors then proceeded to analyse the factors that elucidate how these individuals with disabilities have achieved economic success in these specific countries. To accomplish this, a qualitative analysis was conducted, consisting of interviews with a total of 105 persons with disabilities. During these interviews, participants discussed various obstacles encountered in mainstream employment. In some cases, individuals experienced discrimination from employers or co-workers. For instance, this issue was raised by half of the Kenyan participants. As a result, access to mainstream employment was either completely denied or further advancement within the workplace was impeded for those individuals who had successfully obtained employment. Nevertheless, it is worth noting that a significant number of persons with disabilities interviewed were able to overcome these barriers and achieve success on an equal footing with others. These individuals were employed in diverse sectors, including both the private and public sectors, as well as being self-employed as farmers, shopkeepers, and craftspeople. The study discovered that, with appropriate support, disabled individuals can indeed attain economic success. This finding suggests that investing in the education and training of disabled individuals can be advantageous and should be integrated into broader developmental efforts for economic reasons.

Narayanan (2018) undertook an investigation into the diverse obstacles encountered by disabled individuals within their places of employment in Malaysia. The information pertaining to the aforementioned challenges was collected through the implementation of surveys, interviews, and observations. The results of the study revealed that disabled workers in Malaysia are confronted with a range of impediments at their workplace, such as an inaccessible physical environment, a lack of appropriate assistive technology, and unfavourable attitudes towards disabilities. The respondents contended that there was a misunderstanding surrounding the tasks assigned to them, as they were under the impression that said tasks were beyond the scope of their duties. Consequently, they perceived this situation as discriminatory and felt that their contributions were not valued. These perceptions had a detrimental impact on their morale, leading to a sense of demotivation.

3.3.3 Personal factors

PWDs often suffer from low self-esteem and face psychosocial challenges which is often a result of cultural myths and misconceptions that play a role in perpetuating disability discrimination, as certain African cultures view disabled individuals as a social and economic burden (Setume, 2016; Maja et al., 2011). Individuals with disabilities are faced with significant obstacles resulting from discrimination, particularly from employers' attitudes, which often impact on their mental health. Attitudes, in this context, refer to the overall evaluation of a person, object, idea, or event (Chan et al., 2009; Dunn, 2015). The barriers to employment for PWDs often engraved in corporate culture, have a negative impact on their self-esteem (Kruse & Blank, 2005; Schur et al., 2017; Stone & Colella, 1996). Park and Park (2021) highlighted that psychological factors such as motivation and self-esteem are very important for people with disabilities to get jobs. Therefore, individuals with disabilities may lack confidence in their ability and often avoid careers in physical occupations such as mining and construction.

Trani et al. (2020) investigated the association between stigma, disability, depression and low self-esteem using a random sample of individuals with disabilities in Soweto, a township in South Africa. The study used a propensity score analysis and structural equation modelling. The study found that stigma increases the likelihood of low self-esteem and depression. PWDs have a low self-worth and self-respect, which is prevents

them from searching for employment or seeking career advancements. The findings also revealed that education and employment mitigate the impact of stigma on low self-esteem and depression, which suggests that providing opportunities for education and employment are crucial for the mental health of PWDs. The study supports the proposition of the social model of disability that states that stigma and discrimination increase the likelihood of PWD being excluded from society including employment.

Ramachandra et al. (2017) examined the factors that impact on employment and employability of PWDs in Hyderabad, India using a sample of 147 disabled employees and 53 employers. PWDs faced challenges with accessing and navigating the workplace, receiving clear communication and information, and obtaining training opportunities. They perceived the attitudes of their colleagues as a significant barrier, believing that negative attitudes towards PWDs could lead to discrimination and low self-esteem. Very few employers (3.8%) were aware of their company's written policy on hiring people with disabilities. Employers recognised commitment and perseverance as key qualities that contribute to the success of employees with disabilities.

Other personal challenges faced by PWDs include low skills which often hinders their absorption and retention in employment positions. In a qualitative study, Haihambo (2016) analysed findings from two studies that investigated the challenges faced by disabled individuals in higher education institutions. The obstacles encountered by individuals with disabilities while entering and navigating higher education often hinder their ability to successfully complete their studies and lead fulfilling lives. The author found that despite the establishment of centres within many higher education institutions aimed at aiding the learning and integration of students with disabilities and special needs, disability remains heavily stigmatised. Consequently, students with disabilities do not receive the necessary support required to access education on an equitable basis compared to their non-disabled peers. The study concluded that the capacitation of lecturers was vital for ensuring equitable access to education, which in turn will enhance human capital levels of disabled individuals. According to Makuyana (2022), a number of school-aged children with disabilities in South Africa are currently not enrolled in school. This leads to a growing prevalence of inadequate skills and illiteracy among PWDs. Employers state that despite their willingness to employ them, individuals with

disabilities often lacked the necessary qualifications, experience, and skills for specific roles.

3.4 Overview of factors affecting the employment of people with disabilities

Overall, the literature highlights personal, organisational, and social factors that hinder the employment, retention and training of individuals living with disability. Organisational factors include lack of accommodation, which is evident through lack of suitable infrastructure and transport equipment for ease of work-place accessibility and inflexible work environment. High cost is often cited as the reason for the lack of accommodation. Social factors include stigma and stereotyping enacted by society in general. As such disabled individuals are viewed as less productive in the workplace and risky for employers to hire, train and retain. Other social factors include discrimination (social exclusion), negative attitude, lack of awareness and cultural myths which label disabled individuals as less competent or skilled. Personal factors include self-stigma and lack of confidence which often results from organisational and social factors. Disabled individuals are prevented from seeking employment in occupations such as mining and construction due to the fear of being discriminated against. Table 3.1 presents a summary of the factors or variables that impact on the employment, training, and retention of individuals with disabilities.

Table 3.1: Summary of the factors that impact on employment of PWD

Personal factors	Organisational factor	Social/cultural factors
1. Self-stigma	***1. Lack of accommodations***	***1. Stigma***
2. Lack of confidence	(a) Lack of infrastructure e.g., ramps and elevators	***2. Stereotyping***
3. ***Low self-esteem***	(b) Lack of adequate transportation	***3. Discrimination e.g., s***
	(c) Lack of work-place accessibility	***4. Negative attitude***
	(d) Lack of flexible work arrangement	***5. Lack of knowledge/a***
	(e) High cost of accommodation	***6. Cultural myths***
	2. Challenging physical environment	
	(a) Health and safety	
	3. Stigma/discrimination	
	(a) Enacted stigma	
	(b) Prejudice and Stereotyping	
	(c) Perceived stigma	
	4. Lack of compliance with regulation	
	5. Fear of litigation	

3.5 A synopsis of disability landscape in South Africa

The prevalence of disability is South Africa is discussed in this section. Information included in the overview is based on StatsSA's 2022 census data. The data included in this overview is the percentage of the population with disabilities and disability distinguished according to gender, age, and province. The disability status indicator is calculated in accordance with guidelines defined by the United Nations (UN) disability index. A person is considered to have a disability if they report experiencing any degree of difficulty in any of the six functional domains: seeing, hearing, communicating, walking/climbing stairs, remembering or concentrating, and self-care.

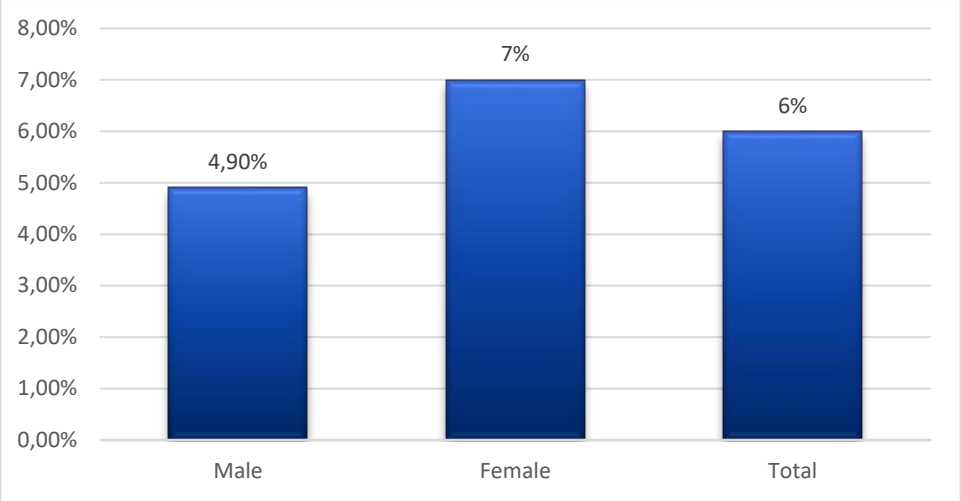


Figure 3.1 Disability in South Africa

Figure 3.1 shows on average, women are more likely to experience disabilities. This trend of higher disability rates among women is consistent across various continents, including North America, Europe, and Asia (Wang et al., 2021). One explanation could be the higher life expectancy for women compared to men. Figure 2 shows that there is positive correlation between disability and age. The increase in life expectancy has over time contributed to the high prevalence of disability among the older generation (Pan et al., 2023).

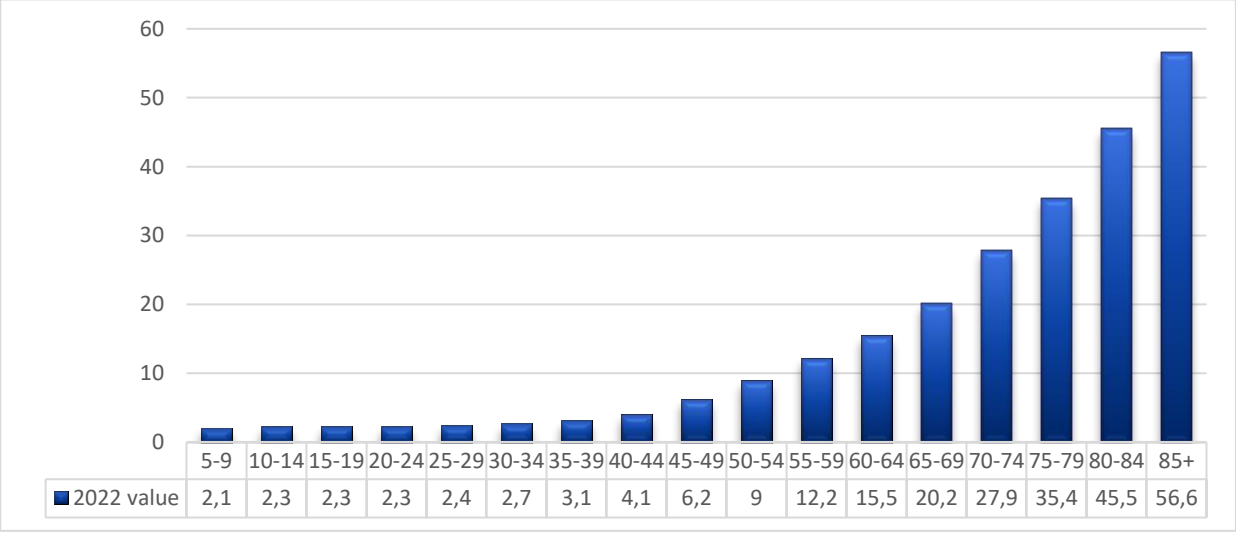


Figure 3.2 Disability by age

Note: the values are measured in percentage terms.

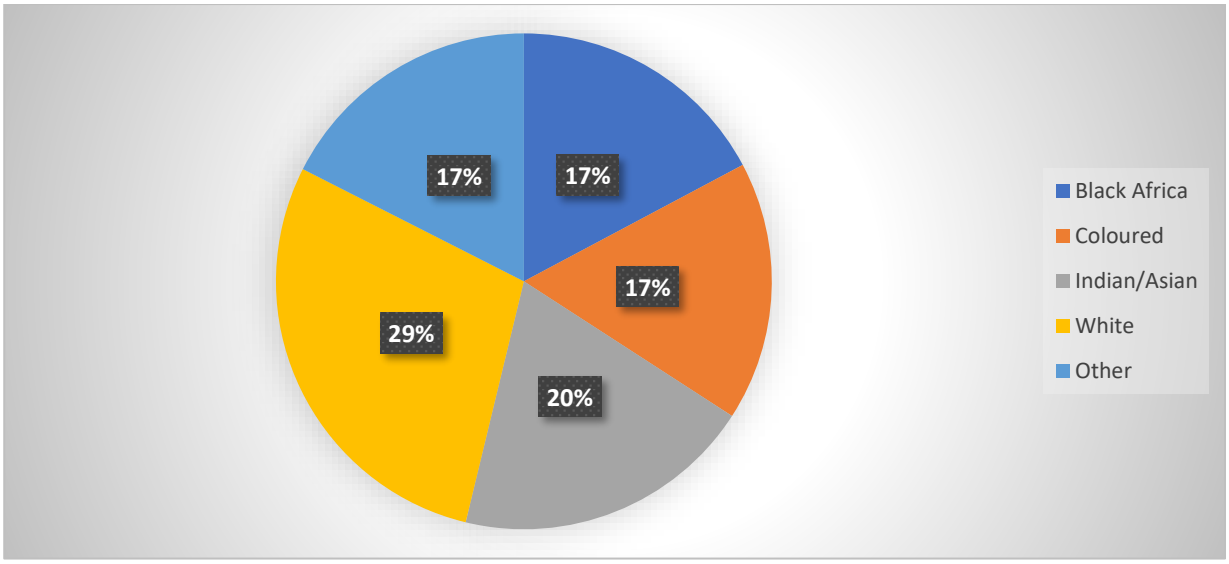


Figure 3.3 Disability by race

As highlighted in figure 3.3, disability is more prevalent among White and Indian/Asian individuals. This contrasts with the previous census in 2011 where disability was more common among Black African individuals. “Other” is used to categorise smaller ethnic groups that do not fall under the main racial categories of Black African, White, Coloured or Indian/Asian. Provincial analysis indicates that there are more individuals living with disability in the Eastern Cape and the Free State. Gauteng has recorded the lowest number of individuals living with disability. The explanation for the high incidence of disability in the Eastern Cape could be the high poverty levels and a high proportion of older people. According to Ngumbela (2021), the Eastern Cape has the highest occurrence (95.4%) of poor, older persons who receive old age grants.

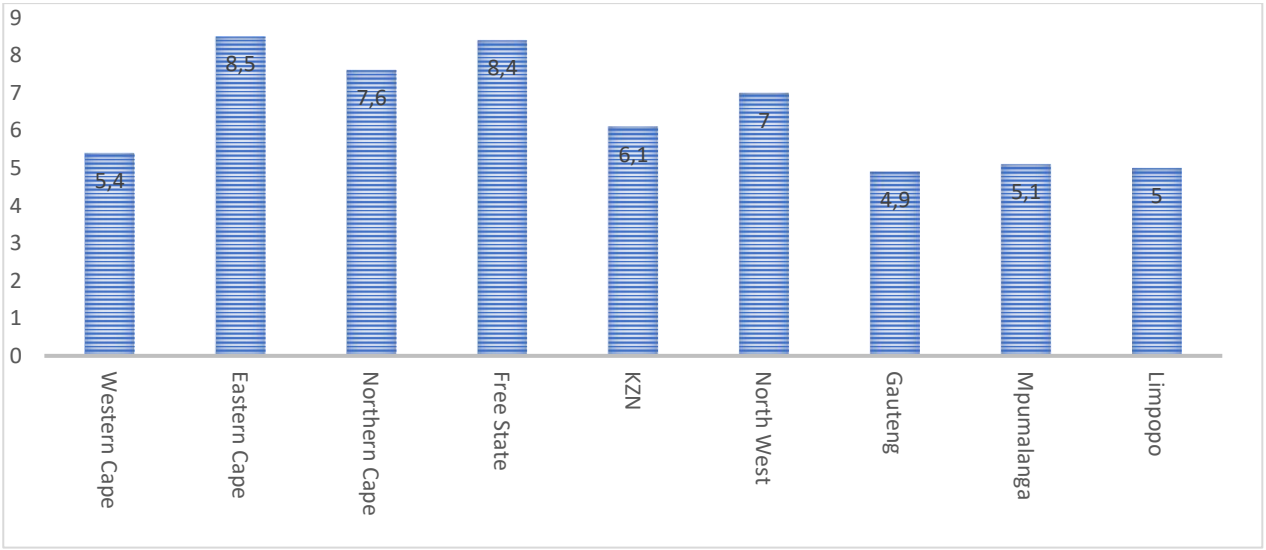


Figure 3.4 Disability by Province

Note: the values are measured in percentage terms.

According to the Department of Labour (2023), in the year 2022, employees with disabilities constituted a mere 1.2% of the overall workforce in South Africa. In terms of the employment of individuals with disabilities, the private sector outperformed the government, with percentages of 1.3% and 0.9% respectively. A significant proportion of employers (10.6%) acknowledged the presence of obstacles hindering the provision of reasonable accommodation. Therefore, representation of persons with disabilities has experienced minimal change since the inception of the Employment Equity Act in 1998. Consequently, it can be deduced that no substantial measures have been implemented within the various economic sectors to effectively address the under-representation of individuals with disabilities. There is evidence of lack of career progression for PWDs when considering the lack of representation of employees with disabilities at the Senior Management level, which stands at a mere 1.3%.

The last part of the report focuses on the challenges of employment of PWDs on a global scale. The discussion is based on the findings from the International Labour Organisation's study on promoting employment opportunities for PWDs using quota schemes. PWDs continue to face challenges with regards to employment absorption and retention, (International Labour Organisation, 2019). In various regions around the globe, individuals with disabilities are less likely to be employed and more likely to be registered as unemployed compared to those without disabilities. Furthermore, they are more inclined to be economically inactive, not categorised as either employed or unemployed, and consequently, they are not accounted for in labour market statistics. When individuals with disabilities are employed, they are more prone to being underemployed, occupying low-wage positions with limited opportunities for advancement and unfavourable working conditions. Considering this growing concern, a number of nations have implemented quota systems as a means to enhance employment opportunities for this marginalised group within the labour market. Employment quotas refer to a stipulated (through legislation) number of PWDs that should be employed by firms from the public and private sectors. (International Labour Organisation, 2019).

A total of 103 countries have been identified as having quota systems in place. The available information has allowed for a preliminary classification of these quotas into two

categories: those that are reinforced by levies or fines that must be paid for non-compliance and are consistently enforced, and those for which there seems to be no effective sanction or enforcement method in place. Out of the identified countries, 33% have quotas supported by levies or fines, 62% have binding quotas, although it remains unclear whether these quotas are enforced or how they are enforced, and 6% have quotas that were introduced through government decisions or decrees, which may not be legally binding. Additionally, 6 other countries are either in the process of implementing a legally binding quota or considering its introduction. (International Labour Organisation, 2019)

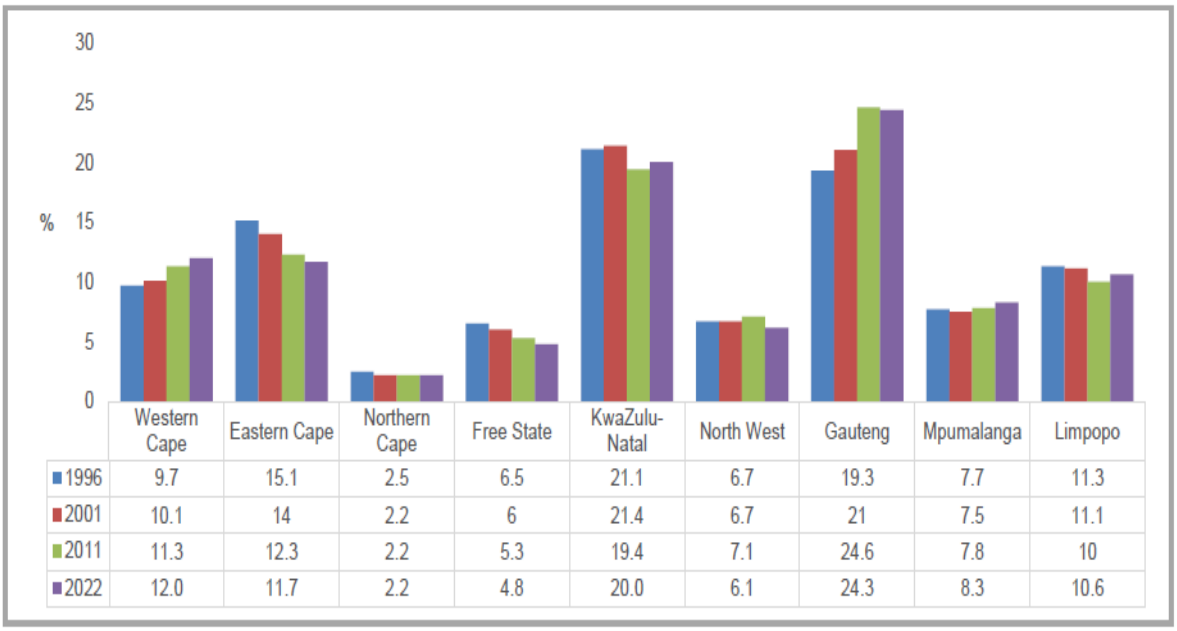
In some countries, employers who fulfil the quota requirement are entitled to various measures, including financial incentives and employment-related support services. The most common incentives were wage subsidies for disabled workers employed under the quota (35% of the schemes), followed by tax exemptions or rebates (33% of the schemes), subsidies to promote accessibility, workplace adaptation, purchase of suitable equipment, or reasonable accommodation (30%), reduction or exemption from social security contributions (23%), and unspecified grants (17%). In some countries, preference is given to companies that meet their quota obligation during the public procurement tendering process. For instance, in Chile, companies that employ a certain percentage or number of individuals with disabilities receive additional points in the evaluation of their bids for government contracts. Similarly, in Peru, under the Public Tenders Act (No. 184-2008-EF), if two businesses have equally ranked public tender bids, preference is given to the company that hires people with disabilities (International Labour Organisation, 2019).

According to the International Labour Organisation (2019), information regarding the effectiveness of the quota system in enhancing employment opportunities for individuals with disabilities is limited to a select few nations. Based on the available data, it is evident that the quota obligation is not fully observed in existing quota systems, and many employers prefer to either make the levy payment or explore alternative options instead of hiring individuals with disabilities to the extent required or at all.

3.6 Population dynamics and its influences on employability of PWDs

Understanding population dynamics and barriers to achieving employment of PWDs requires the consideration of various factors. These include prevalence of disabilities

geographically. The overall prevalence of disabilities within the population is crucial. Understanding the types and severity of disabilities in a particular province or region is very important. Secondly, understanding the legal and policy framework around the disability paradox will help provide some answers and unearth new knowledge. Therefore, it cannot be expected that all the provinces will have an equal number of disabilities given the population dynamics, life expectancy in the province and predominance of a particular age group. All of the above contributes to the status quo. The diagram below reflects population distribution by province, meaning comparing these provinces in relation to disabilities cannot be fully justifiable.



	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo
1996	9.7	15.1	2.5	6.5	21.1	6.7	19.3	7.7	11.3
2001	10.1	14	2.2	6	21.4	6.7	21	7.5	11.1
2011	11.3	12.3	2.2	5.3	19.4	7.1	24.6	7.8	10
2022	12.0	11.7	2.2	4.8	20.0	6.1	24.3	8.3	10.6

Figure 3.5 Population spread in South Africa - Source: *Statistics South Africa* (2023)

The above picture indicates the population dynamics that contribute to the inability of the mining sector to attain its employment targets in respect of PWDs. In the study it became evident that numbers of PDWs vary from province to province.

3.7 Geographic Distribution

Mining operations in South Africa are typically spread across various provinces and regions, as the country is rich in mineral resources. Some key Provinces associated with mining activities include what is tabled in figure 3.6

Gauteng: This province is known for its gold mining operations, and it houses some of the world's deepest mines. Johannesburg, in Gauteng, is often referred to as the "City of Gold."

Limpopo: This province is known for platinum group metals (PGM) mining, and it has significant deposits of chrome and other minerals.

Northern Cape: This province is a major player in the production of iron ore and manganese. Diamond mining also takes place in the Northern Cape.

Mpumalanga: Known for its coal reserves, it is a significant region for coal mining activities.

North West: This province is home to both gold and platinum mining operations.

Free State: Gold mining is prominent in the Free State province.

Figure 3.6 Geographic distribution of MMS in South Africa

It is essential to note that the specific locations and spread of mining operations can change over time based on factors such as exploration discoveries, changes in mineral prices, and industry developments.

3.7 South African Mining Map

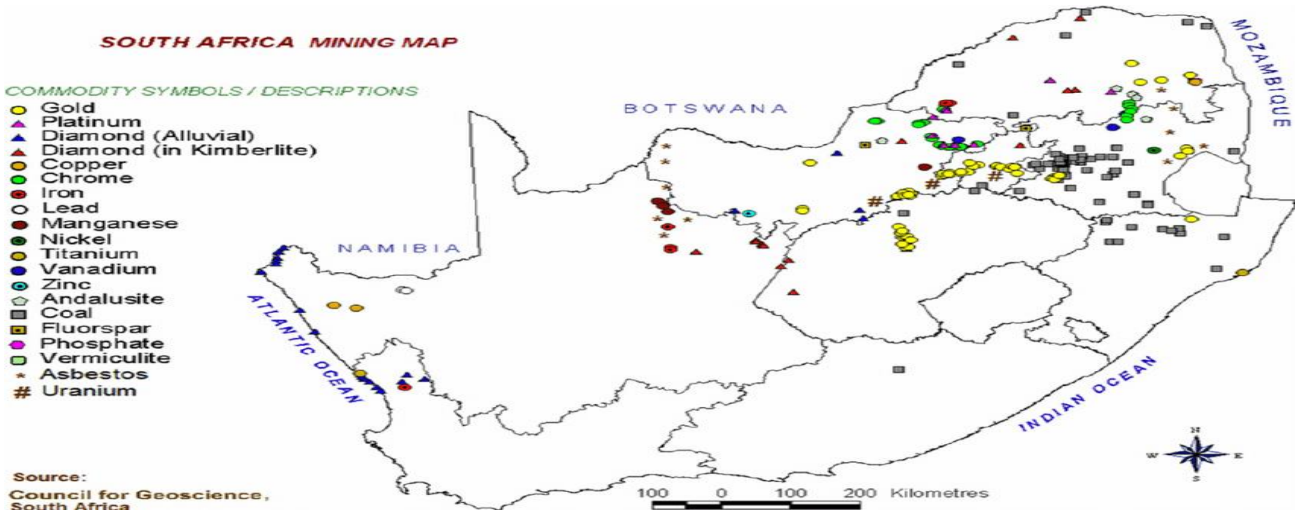


Figure 3.7 South African Mining Map - Adapted from: Utembe et.al (2015)

3.9 Theoretical Review

The heart of this research lay in the comprehensive exploration of factors that contributed to the persistent underrepresentation of individuals with disabilities in the South African mining sector. The literature review endeavoured to construct a robust theoretical, empirical, and conceptual framework, forming the basis for gaps in literature.

The Theoretical framework delved into existing theories elucidating the multifaceted factors influencing the employment of individuals with disabilities. Simultaneously, the empirical literature scrutinised relevant studies that probed the determinants of employment for persons with disabilities. Finally, the conceptual framework offered a systematic analysis, delineating the intricate relationships uncovered during this study.

By synthesising these perspectives, this research aspired to not only diagnose the challenges but also prescribe effective solutions for fostering inclusivity and equitable opportunities within the Mineral and Mining Sector in South Africa.

3.9.1 Theoretical literature

The theoretical literature reviews personal, social, and organisational factors that determine employment of individuals with disabilities. The theories identified for the study include the social model of disability which argues that the employment of PWDs is hindered by barriers placed by society, the stigma model of disability which offers insights into how societal attitudes and perceptions, and self-stigma, impact people with disabilities, and the human rights model which promotes the removal of barriers and discrimination, fostering an inclusive and accessible environment that respects the dignity of individuals with disabilities. This places the responsibility on the industry to inculcate a culture of inclusivity, civic education, as well as employing people not out of meeting targets but seeing potential and capability as well.

3.9.2 Social model of disability

The social model of disability perceives disability as a social construct and emphasises how societal barriers can limit the employability, retention, and training of individuals with disabilities. This perspective scrutinises the influence of societal attitudes, policies, and practices on the employability of individuals with disabilities. The model was developed

by disability rights activist Mike Oliver in 1983 (Terzi, 2004; Beaudry, 2016) and suggests that a person does not 'have' a disability; disability results from societal or individual attitudes and actions that fail to consider the needs of individuals with impairments (Daruwalla & Darcy, 2005; Dirth & Branscombe, 2017). This exclusion can lead to people with impairments being marginalised from mainstream society. For example, an individual is not prevented from reading a magazine due to blindness but rather because alternative formats are unavailable. Similarly, a person in a wheelchair is not prevented from attending a play; the barriers lie in the absence of accessible transport and venue access, leading to disability and exclusion.

The social model of disability emerges from how society shapes attitudes and environments (Dirth & Branscombe, 2017). It asserts that impairments themselves do not cause disability, but disability arises from the interaction of impairment with barriers present in physical, attitudinal, social, cultural, and economic environments (Barnes 2000, 2012; Terzi, 2004; Shakespeare, 2006). Supporters of this model argue that individuals with impairments are often denied civil, political, social, and cultural rights, which infringe upon their inherent human dignity and their right to equality (Daruwalla, & Darcy, 2005; Dirth & Branscombe, 2017).

The social model, however, recognises that, from the perspective of disabled individuals, the challenges they face are the barriers they encounter in society (Maja et al., 2011). This theory emphasises that disability is not solely the result of an individual's impairments but is largely influenced by the social and physical environment. Another feature of the social model is that it regards disability as an external factor indicating that limitation is prejudice and inaccessibility to the environment rather than by the actual impairment (Dirth & Branscombe, 2017). The social model encompasses all factors that impose restrictions on people with disabilities, ranging from negative social attitudes to institutional discrimination, from inaccessible public buildings to unusable transport systems, and from segregated education to exclusion in work arrangements (Hiranandani, 2005). Furthermore, societal attitudes and culture create a disadvantage for people with disabilities, as they are labelled as incapable, and nobody questions the societal norms (Eneya & Mostert, 2019).

According to the social model of disability, individual limitations are not the root cause of disability. Instead, it attributes disability to society's failure to provide appropriate accommodations and services, as well as to ensure that the needs of disabled individuals are adequately considered in societal organisation (Daruwalla, & Darcy, 2005). Simple steps, like constructing wheelchair-accessible sidewalks and entrances, can transform a disability into an ability. This model asserts that people are disabled due to social and environmental barriers rather than their inherent impairments or personal limitations (Shakespeare, 2006).

The social model emphasises the importance of offering equal opportunities to individuals with disabilities. In the context of the labour market, there is a need to consider both the context and individualism of people with disabilities. Inclusive employment for individuals with disabilities necessitates focusing on more than just their knowledge, skills, or physical infrastructure. The influence of how society perceives disability and responds to impairment must be considered if social capital is to create economic opportunities and enhance employability. Social capital is seen as a mechanism to support employability and sustain disability-inclusive employment practices, especially for those at high risk of marginalisation and reduced self-determination (Hosking, 2008).

The social model emphasises the requirement for physical and environmental accessibility in the workplace to accommodate individuals with disabilities. According to Owens, (2015) the workplace must be equipped with facilities and equipment adapted to meet the needs of individuals with disabilities. This includes the provision of accessible pathways and assistive technologies, encompassing the principles of accessibility and inclusivity. The social model advocates for reasonable accommodations to support individuals with disabilities in the workplace, which may involve providing specialised tools, flexible work schedules, or additional assistance to ensure effective job performance (Beaudry, 2016). However, implementing and sustaining these accommodations may require changes in the values and culture of the organisation, which can be challenging. The social model of disability aims to eliminate unnecessary barriers that hinder the participation of disabled individuals in society, their access to employment, and their ability to live independently (Barnes, 2019).

It should be noted that the weakness of the social model is its limited consideration of individual impairments. This means that the social model tends to focus on the societal barriers that create disability rather than on the unique characteristics and experiences of individuals with impairments. Critics argue that it sometimes downplays the significance of individual impairments, which can profoundly affect a person's life (Owens, 2015). In certain situations, medical interventions and support for specific impairments are crucial. While a work environment that is not accommodative to individuals with disabilities plays a key role in disabling individuals, this model can sometimes oversimplify the complex relationship between an individual's impairments and their surroundings. Furthermore, the social model does not consistently account for the diverse experiences within the disability community, often failing to address the unique challenges faced by individuals with different types and severities of disabilities (Haegele *et al.*, 2016). However, Terzi (2004), argues that despite its limitations, the social model of disability is still a powerful and important framework for understanding disability. It corrects simplistic views of the disabled experience and reveals the oppressive nature of some social arrangements.

The study by Yang (2022) found that the adoption of the social model of disability in the context of China has been successful in understanding the experiences of disabled individuals in online activism. The adoption of the social model as an organising principle has changed social patterns and reduced social isolation. In South Africa, the social model is evident in the Integrated National Disability Strategy (1997) and the Department of Labour's Code of Good Practice: Key Aspects on the Employment of People with Disabilities (2002).

3.9.3 Stigma model of disability

According to the Canadian sociologist Erving Goffman, stigma refers to the state of an individual who is excluded from full social acceptance (Goffman, 1963). Stigma theory is a tool for understanding disability discrimination. Despite evolving attitudes towards disability, there remains evidence of stigmatisation and discrimination against people with disabilities (Antonak & Livneh, 2000; Richard & Hennekam, 2021). When some employers evaluate an applicant or employee with a disability, they may activate conscious or unconscious biases against the individual (Travis, 2002). The stigma model

of disability outlines various forms of stigma that individuals encounter, which include enacted stigma, perceived stigma, and self-stigma (Čolić, et al., 2022). Enacted stigma refers to the actual experiences of discrimination or prejudice faced by individuals with disabilities (Staniland, et al., 2021)

Perceived stigma involves the awareness or anticipation of being stigmatised by others, leading to feelings of shame or embarrassment (Burzotta & Bertolino, 2023). Lastly, self-stigma refers to the internalisation of negative beliefs and attitudes about one's own disability, leading to low self-esteem and self-efficacy (Ali, et al., 2008). These different forms of stigma can have significant impacts on the lives of individuals with disabilities, affecting their opportunities for employment and social participation (Jammaers, & Hardonk, 2023). Understanding and addressing these various dimensions of stigma is crucial for promoting inclusivity and equality for individuals with disabilities in the workplace and society.

3.9.3.1 Enacted stigma

The employability of people with disabilities can be affected by enacted stigma, which refers to overt discrimination and prejudice (Benoit et al., 2013). In the workplace, this may manifest as discriminatory hiring practices, unequal pay, or limited career advancement opportunities for individuals with disabilities. Employers may hold negative stereotypes about the capabilities of people with disabilities, leading to their exclusion or unfair treatment (Schur, et al. 2005 &Vornholt, et al., 2018). People with disabilities may be subjected to negative stereotypes in the mining and mineral sector, such as assumptions that they are less capable or productive (Moraka, & Jansen van Rensburg, 2015). These biases can influence hiring decisions and promotion opportunities. Due to discrimination, individuals with disabilities may face disadvantages in hiring practices, especially when employers prioritise certain physical abilities or characteristics that may be essential for that particular job (Vornholt et al., 2018 & Gewurtz, et al., 2016).

In addition, the prejudice in the stigma model refers to labelling and stereotyping, where individuals are labelled in certain characteristics that society deems undesirable (Abbey, et al., 2011). Prejudice is fuelled by these labels and stereotypes, as they shape how society views and interacts with stigmatised individuals. Research has shown that

prejudice towards people with disabilities can lead to social exclusion (Jenaro, et al., 2018). People with disabilities are often associated with high warmth (perceived as kind and well-intentioned) but low competence (perceived as lacking skills and abilities) (Canton, Hedley, & Spoor, 2023). Lascioli (2016) is of the view that overcoming prejudice and stereotypes towards people with disabilities is important for promoting social change and reducing discrimination. Targeted interventions and re-education efforts can help challenge and change these negative attitudes and beliefs.

3.9.3.2 Perceived stigma

Perceived stigma refers to the fear or anticipation of encountering discrimination (Travis, 2002). Individuals with disabilities may be discouraged from seeking employment due to the fear of facing discrimination, which can limit their access to job opportunities. They may anticipate negative reactions from potential employers, coworkers, or customers, which can destroy their confidence and motivation to pursue employment (Melton, et al., 1987& Pérez-Garín et al., 2018). Discrimination can also manifest in limited access to employment opportunities for individuals with disabilities. They may encounter barriers when applying for jobs or advancing in their careers, such as inaccessible job application processes or a lack of accommodations during interviews and assessments (McKinney & Swartz, 2021). The failure to provide reasonable accommodations can significantly disadvantage individuals with disabilities. In the mining and minerals sector, this might encompass the absence of assistive technologies, ergonomic adaptations, or flexible work arrangements, which are vital for the success of employees with disabilities (Dempsey, et al., 2018).

3.9.3.3 Self-stigma

Self-stigma involves the negative beliefs about one's own disability (Watson, et al., 2006). When individuals with disabilities internalise societal stereotypes and perceive themselves as less capable or undesirable employees, it can undermine their self-esteem and self-efficacy, making it more challenging for them to actively seek and maintain employment.

The stigma model of disability has its limitations. One key concern is that it tends to oversimplify the experiences of people with disabilities by primarily focusing on societal reactions and categorising individuals as either "normal" or "stigmatised" (Retief & Letšosa, 2018). This simplicity does not capture the individual's experiences within the disability community. Furthermore, the model concentrates predominantly on the individual and interpersonal levels of stigma and may not adequately address the broader structural and systemic factors that contribute to discrimination and social exclusion, such as inaccessible infrastructure and policies. In conclusion, the stigma model of disability offers valuable insights into how societal attitudes and perceptions impact people with disabilities. However, it has limitations in capturing the complexity and diversity of disability experiences and may not comprehensively address the systemic and structural issues related to disability discrimination.

The strength of the stigma model lies in its emphasis on the significant role of society in both the creation and perpetuation of disability stigma. It highlights the crucial point that disability is not merely an individual experience but is profoundly shaped by how society views and interacts with individuals with disabilities. This model offers a structured framework for recognising and comprehending the various forms of stigma that individuals with disabilities may face, encompassing enacted stigma (involving discrimination and prejudice), perceived stigma (involving the fear of encountering discrimination), and self-stigma (pertaining to internalised negative beliefs about one's own disability) (Smart, 2009). Its value lies in providing this understanding, which can then be utilised to craft policies and strategic interventions aimed at reducing discrimination and improving the lives of people with disabilities in both society and the workplace.

3.9.4 Human rights model

The model is firmly grounded in fundamental human rights principles. It acknowledges that disability is a fundamental aspect of human diversity that deserves respect and support in all its variations (Degener, 2014). People with disabilities are entitled to the same rights as any other members of society, and disability or impairment should never be used as a justification for denying or limiting those rights (Korolkova & Anthony, 2016).

The human rights model emphasises the lack of equality and opportunities for participation as the disabling factor for persons with disabilities rather than their impairments. It promotes the empowerment of individuals with disabilities through their right to healthcare, education, and employment, and the legal and social responsibility of institutions to implement these rights (Degener, 2017). The employability of people with disabilities can be comprehensively examined and understood within the framework of human rights principles, particularly in the context of international and national frameworks for disability rights and inclusion. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD serves as a comprehensive guide for promoting and safeguarding the rights of individuals with disabilities, including their right to work and access employment opportunities (Bantekas et al., 2018).

The employability of people with disabilities within the human rights model can be explained by the following key factors. Firstly, the principle of non-discrimination suggests that individuals with disabilities should not face discrimination at any stage of employment, from recruitment to advancement (Cera, 2017). Employers are obliged to provide equal opportunities and fair treatment to all employees, regardless of their disability. Secondly, employers have a duty to make reasonable accommodations that enable people with disabilities to participate in the workforce (Ferri, 2018). This may involve providing assistive technology, adjusting workspaces, or adapting work hours to ensure that individuals with disabilities can effectively perform their jobs. Thirdly, the rights of people with disabilities to work on an equal basis with others is recognised (Farraina, 2012; Fasciglione, 2015).

Governments are responsible for creating an inclusive labour market where individuals with disabilities have the same opportunities as those without disabilities. Fourthly, the UNCRPD also highlights the significance of supported employment for people with disabilities (Ferraina, 2012). This entails governments and employers providing the necessary support and services to help individuals with disabilities find and maintain employment (O'Brien, 2022). Fifthly, employers should ensure that their workplaces, websites, and communication materials are accessible to all, including disabled individuals (Seatzu, 2017).

This guarantees that people with disabilities can apply for jobs and carry out their responsibilities without encountering barriers. Sixthly, individuals with disabilities have the right to participate actively in society and the labour market (Ferri & Leahy, 2023). Employers should encourage an inclusive workplace culture that values diversity and encourages the participation of all employees, including those with disabilities. Lastly, people with disabilities are entitled to protection from exploitation and abuse at work. This encompasses safeguarding their physical and mental well-being and ensuring that they are not subjected to discrimination or harassment (Laing, 2017).

The human rights model champions equal opportunities, non-discrimination, and reasonable accommodation, among other principles, to ensure that people with disabilities enjoy the same access to employment as any other members of society (Kanter, 2022). This promotes a more inclusive, diverse, and equitable workforce, benefiting both individuals with disabilities and society as a whole. The human rights model of disability is based on the social model of disability and therefore, some of the advantages and limitations of the social model are applicable. A study conducted by Pillay et al., (2015) in South Africa reveals that the human rights approach provides an inclusive framework for incorporating individuals with disabilities into work environments. This approach also brings about a transformation in organisational attitudes PWDs, fostering a culture that embraces diversity. To achieve this transformation, it is crucial to focus on applying principles of equality and human rights, thereby creating enabling environments that include individuals with disabilities. In the context of democratic practices in South Africa, the importance of human rights and equality becomes evident, particularly in the representation of PWDs in the workplace. Both equality and human rights play increasingly vital roles in promoting the integration of diversities within public organisations.

The countries that have adopted the human rights model of disability include both developed and developing countries that are part of the United Nations (UN). The African Disability Protocol marked a shift in the African human rights system towards a social and human rights approach to disability (Msipa & Juma, 2023). In Europe, the UNCRPD has influenced disability assessments and led to the recognition of the need for a social-contextual concept of disability and a human rights approach (Waddington, and Priestley, 2021). The UNCRPD has had a global impact, inspiring disability activism in the United

States, Japan, and Germany, and leading to the adoption of the convention as a legally binding treaty by the United Nations General Assembly (Degener, 2016). This model of disability rights as human rights went global in 2006, when the United Nations General Assembly adopted the legally binding Convention on the UNCRPD. Rights Enabled is a sophisticated sociolegal study of how the disability paradigm shifted from the medical to the social model, expressed in public policy as the welfare model versus the rights model (Rodriguez, 2015).

The UNCRPD has gained significant support from developing nations, including South Africa. Mexico proposed the UNCRPD in 2001, and many countries in the Global South backed its adoption (Meekosha & Soldatic, 2011). South Africa was among the first nations to sign and ratify the Convention and its optional protocol in 2007. The South African White Paper on the Rights of Persons with Disabilities aligns with the UNCRPD and is based on its principles and values, establishing the South African government's fundamental stance on disability within the human rights-based approach (Republic of South Africa, 2016).

In reviewing the literature, it is evident that employment of PWDs can be explained by the social, human rights and stigma models disability. The three theories highlight the personal, social/cultural and organisational factors that impact on the absorption and retention of PWDs in employment. Therefore, the three theories will underpin the empirical analysis of the study. According to the social model of disability, individual limitations are not the root cause of disability. Instead, it attributes disability to society's failure to provide appropriate accommodations and services, as well as to ensure that the needs of disabled individuals are adequately considered in societal organisation. This theory emphasises the role played by organisations in providing adequate infrastructure to accommodate individuals with disability. The human rights model emphasises the lack of equality and opportunities for participation as the disabling factor for PWDs rather than their impairments. The stigma model emphasises the impact of stigmatisation and discrimination against PWDs in employment absorption and retention.

3.10 Conceptual framework

This section introduces a conceptual framework that delineates the variables forming the foundation of the study. As outlined by Imenda (2014), a conceptual framework is a synthesis of concepts and perspectives derived from various sources. Within this study, the conceptual framework serves to outline the social, personal, and organisational factors influencing the absorption and retention of PWDs.

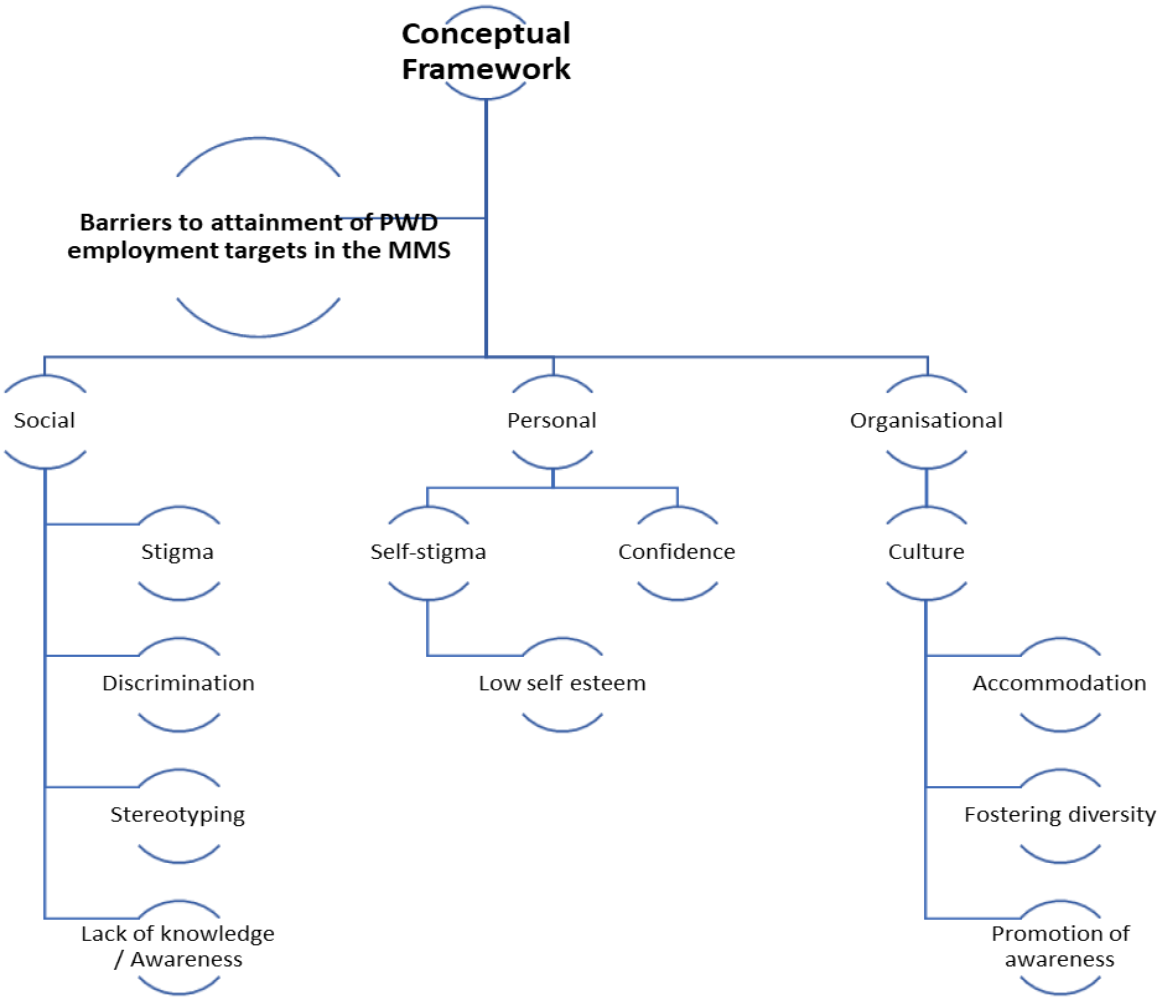


Figure 3.8 Conceptual Framework

3.10.1 Disability defined

The study adopts the definition of disability from the UNCRPD. According to the UNCRPD, PWDs are individuals with enduring physical, mental, intellectual, or sensory impairments that, when encountering various barriers, may impede their full and effective

participation in society on an equal basis with others. The UNCRPD acknowledges that disability goes beyond an individual's impairment, encompassing how society interacts with that impairment. Barriers such as negative attitudes or inaccessible structures can transform an impairment into a disability. It is noteworthy that the UNCRPD's definition of disability has been ratified by 185 nations as part of the United Nations.

3.10.2 Social factors

Social factors include stigma, discrimination, stereotyping, lack of knowledge/awareness that act as barriers to the absorption and retention of workers with a disability. These factors are defined as follows:

Stigma

Stigma is defined as the phenomenon in which an individual with a certain attribute is deeply discredited by society and is rejected due to that attribute, which others find unacceptable (Goffman, 1963). Stigma can also be defined as the social devaluation of individuals or groups based on certain characteristics, leading to rejecting behaviours and unequal treatment (Lewis-Brown, and Batty, 2021). Grinker (2021) conceptualises stigma as the result of the interaction between labelling, stereotyping, separation, and discrimination by community members who hold superior positions in terms of social, political, and economic power.

Discrimination

Discrimination entails the unfair treatment of an individual or group based on their identity or characteristic (Antonak & Livneh, 2000; Richard & Hennekam, 2021). Characteristic in this case includes disability, race, gender, religion, and age. Discrimination manifests as unequal treatment, human rights violations, and social exclusion, marginalising certain individuals or groups in society.

Stereotyping

Stereotyping involves assigning individual qualities or characteristics to a group of people based on their affiliation to the group. This is a form of generalisation where individuals are reduced to certain traits and characteristics, and often treated similarly despite differences (Burzotta, and Bertolino, 2023).

Lack of knowledge/Awareness

This refers to limited knowledge about disabilities and their diverse needs which results in lack of support systems, inappropriate communication, and stereotyping. This causes further marginalisation of PWDs (Gewurtz et al., 2016).

3.10.3 Organisational factors

Organisational factors refer to workplace culture, which include reasonable accommodation, awareness, and lack of stereotyping of PWDs (Bailey et al., (2022). A workplace that fosters diversity, provides reasonable accommodations, and promotes awareness can mitigate barriers to employability. Accommodation of individuals refers to the creation of a conducive and inclusive environment that's fosters active participation and provides opportunities for growth and development for all individuals.

3.10.4 Personal factors

Personal factors that impact on the employment of PWDs include self-stigma, low self-esteem and confidence. Self-stigma is the internalisation of negative stereotypes and social attitudes, while low self-esteem and confidence is when individuals feel worthless and incapable as a result of disability (Maja et al., 2011, Park &Park, 2021).

3.11 Policy and legislation governing employment of persons with disabilities

This section discusses the legislation that governs the employment of PWDs in South Africa. The Constitution of the RSA Act 108 of 1996 is the overarching law of the country. It is from this law that all other policies flow. Chapter 2, the Bill of Rights, provides for equal opportunity and a non-discriminatory South Africa. This underpins the importance of participation and creating an attractive workspace for PWDs. This is not only about compliance and meeting employment targets but inclusivity. Organisational culture plays a critical role in making the mining sector attractive.

The focus is on legislation that directly impacts on the employment of PWDs. The apartheid regime approached the issue of disability as a social welfare and medical matter, often referred to as the "medical model." (Republic of South Africa, 2016) This approach involved evaluating and offering services to individuals with disabilities based on their medical conditions. Consequently, the services primarily concentrated on offering

social assistance, along with some fundamental rehabilitation services (Republic of South Africa, 2016). The democratic government developed and implemented a transformation plan with the goal of establishing a fair and inclusive society for everyone (Mogensen, 2022). This plan, in line with the social model of disability, encompasses all historically disadvantaged individuals, including those with disabilities.

The Constitution of the Republic of South Africa

The social model of disability has been incorporated in government policies and legislation. In 1996, the Constitution of the Republic of South Africa (Act No 108 of 1996) was adopted. The Constitution safeguards the rights and respect of individuals with disabilities and advocates for and facilitates the attainment of equal opportunities for people with disabilities, as well as their inclusion in society. The constitution prohibits discrimination based on disability, recognising that disabled people have been and continue to be discriminated against because of their disability (Dube, 2005). This inclusion of disability in the constitution has led to changes in legislation and policy and has created opportunities to address inequalities experienced by disabled people in the past. The new constitution also represents an important milestone in the struggle of disabled people to overcome their exclusion from mainstream society. The constitution's recognition of disability reflects the struggle of disabled people to be treated equally to all other people.

Dube (2005) discovered that incorporating disability into South Africa's Constitution and legislative structure has had a positive impact on the lives of individuals with disabilities. This legislation has increased awareness about disability-related issues and created opportunities to address historical and current inequalities experienced by the community.

Labour Relations Act

The Labour Relations Act (LRA), Act No. 66 of 1995, is the primary law governing employment relations in South Africa (Republic of South Africa, 1995). It sets out the framework for collective bargaining, dispute resolution, unfair labour practices, and compliance with labour laws.

Key objectives of the LRA:

- To promote and protect the rights of workers
- To establish a framework for collective bargaining and dispute resolution

- To promote employment equity and prevent unfair discrimination
- To promote workplace democracy and participation
- To ensure compliance with labour laws

The Mine Health and Safety Act

The Mine Health and Safety Act (MHSA), Act No. 29 of 1996, is the primary legislation governing health and safety in the South African mining industry. The MHSA aims to promote a culture of health and safety in the mining industry, to provide for the enforcement of health and safety measures, and to protect the health and safety of mine employees and communities affected by mining operations.

The Mine Health and Safety Act 29 of 1996 intends:

- to provide for protection of the health and safety of employees and other persons at mines and, for that purpose -
- to promote a culture of health and safety;
- to provide for the enforcement of health and safety measures;
- to provide for appropriate systems of employee, employer and State participation in health and safety matters;
- to establish representative tripartite institutions to review legislation, promote health and enhance properly targeted research;
- to provide for effective monitoring systems and inspections, investigations, and inquiries to improve health and safety;
- to promote training and human resources development;
- to regulate employers' and employees' duties to identify hazards and eliminate, control, and minimise the risk to health and safety;
- to entrench the right to refuse to work in dangerous conditions; and
- to give effect to the public international law obligations of the Republic relating to mining health and safety;

The White Paper on an Integrated National Disability Strategy

In 1997, the White Paper on an Integrated National Disability Strategy (INDS) was developed. INDS was based on the following vision: “A society for all, one in which PWDs

are actively involved in the process of transformation" (Republic of South Africa, 1997). The White Paper marked a significant shift in the way disability is understood. It moved away from the medical or welfare model, which viewed disability as a medical condition or a social problem, and towards a social model, which recognises disability as a human rights issue and a developmental challenge (Kahn, 2017). The White Paper emphasised the importance of achieving a good and equitable quality of life for PWDs (Republic of South Africa, 1997). It outlined two main objectives:

- Integration: PWDs should be systematically integrated into all policies, plans, programs, and strategies aimed at improving the quality of life for all citizens. This should be done at all levels, within all public and private institutions.
- Coordinated approach: A coordinated, multi-sectoral, interdisciplinary, and integrated approach should be taken when designing and implementing programs and interventions that affect major national population concerns. This means that different sectors of government, civil society, and the private sector should work together to address the needs of PWDs.

The White Paper also called for the removal of barriers that discriminate against PWDs in the workplace. Specifically, it proposed the following policy objectives:

- Narrow the unemployment gap: The unemployment rate for PWDs should be reduced to be closer to the unemployment rate for able-bodied persons.
- Broaden employment options: PWDs should have a wider range of employment options to choose from, allowing them to make informed decisions about their careers.
- Facilitate vocational integration: PWDs should be able to integrate into the workforce regardless of the origin, nature, or degree of their disability.

The White Paper on Integrated National Disability Strategy was a groundbreaking document that laid the foundation for a more inclusive and equitable society for PWDs in South Africa. However, challenges of implementation persist as PWDs continue to face discrimination and employment challenges in both the private and public sectors (Kahn, 2017).

Skills Development Act

The Skill Development Act of 1998 was drafted with aim to address this national shortage of the skilled workforce. The Skills Development Act of 1998 intends to improve workforce

knowledge and expertise in order to boost productivity and employment in all economic sectors of the country. The Act's main goals are to maximise employees' living standard, job chances, and free movement of labour (Republic of South Africa, 1998) From this Act, the Sector Education and Training Authorities (SETAs) were established. The SETAs are industry-specific bodies that play a crucial role in transforming the South African labour market. Their objectives include addressing the skills shortage, tackling social development challenges, and expanding post-school opportunities. The SETAs' primary target groups are individuals considered previously disadvantaged, including Black South Africans, women, and PWDs (Botha et al., 2023).

With regard to the mining sector, the Mining Qualifications Authority (MQA) is responsible for driving transformation in the South African mining and minerals sector, by way of skills development programmes (MQA, 2023). MQA is required to develop a Sector Skills Plan (SSP) and submit it to the Department of High Education and Training (DHET), followed by monitoring of its implementation. In addition, the SSP is required to guide skills development interventions within the mining and minerals sector (MMS). The main purposes of the SSP, outlined in the Skills Development Act 1998, Section 10 (1) are the following:

- Inform supply-side planning in post-school institutions;
- Determine funding priorities via the levy grant system;
- Support regional and employer plans;
- Inform allocation of resources to develop qualifications and learning programmes;
- Establish occupation-specific skills priorities for the sector;
- Inform education and training institutions of demand needs in the labour market;
- Enable individuals to make informed career choices; and
- Monitor skills development provision in the sector.

In the same alignment, the following skills priorities have been defined by the MQA because of the analysis in the SSP:

- Priority 1: Support transformation of the sector through skills development;
- Priority 2: Core mining skills must continue to be developed through skills programmes;
- Priority 3: Monitor and develop the skills required for Minerals Beneficiation;
- Priority 4: Continue to improve Health and Safety standards; and

- Priority 5: Develop skills for sustainability.

PWDs in South Africa face significant obstacles to obtaining higher education, contributing to their low levels of formal employment. Inadequate basic education, funding limitations, and persistent accessibility issues hinder their entry into degree-level programs (Botha et al., 2023). Learnerships offered by the SETAs have been proposed as a potential solution to address this challenge and enhance employment opportunities for PWDs. While research on the long-term impact of SETA learnerships on the labour market is limited, the fluctuating employment statistics for PWDs highlight the need for a critical review of South Africa's skills development policies and implementation strategies.

The Employment Equity Act

The Employment Equity Act (EE Act) No. 55, 1998, derived from South Africa's Constitution, is the primary legislation safeguarding the rights of disabled employees. As per the EE Act, individuals with disabilities are those experiencing a persistent or recurrent physical or mental impairment that significantly hinders their ability to enter or progress in employment (Ximba, 2016). The EE Act endorses the social model of disability, taking external barriers into account when defining disability. It recognises the inherent dignity and value of every individual and actively enforces their constitutional rights. Under the EE Act, employers are mandated to create discrimination-free work environments and prioritise people with disabilities, who are designated as special beneficiary groups, in their affirmative action measures and progressive plans. Employers must also conduct assessments of their workplace cultures, identify policy, and practice barriers, and analyse their workforce profiles, ensuring that the Act is fully applied and implemented. Individuals with disabilities are entitled to the same opportunities and benefits as other individuals and as such, the EE Act explicitly prohibits discrimination based on an individual's disability. This means that individuals with disabilities should receive equal access, opportunities, and fair treatment in various employment aspects, including job applications, recruitment, training, transfers, promotions, succession planning, dismissal, retrenchments, terminations, and when an employee returns to work following a disability-related absence (Basson, 2017). This prohibition covers matters

such as remuneration, overtime, working hours, holidays, benefits, shift work, disciplinary actions, and performance evaluations.

The study conducted by Oosthuizen and Naidoo (2010) found that organisations only aim to achieve the stipulated targets in the EE rather than improving their EE status quo through value adding investments. The authors argue that EE progress should be measured on the criteria of numbers as well as their organisational climate.

The Promotion of Equality and Prevention of Unfair Discrimination Act

The Promotion of Equality and Prevention of Unfair Discrimination Act of 2000 (PEPUDA) offers protection against discrimination based on among others, disability to individuals, companies, organisations, and government departments. Discriminating against someone due to their disability, such as denying them access to employment, education, or facilities, is considered a form of discrimination. Section 6 of PEPUDA, which universally prohibits unfair discrimination, is elaborated upon in sections 7-9, which focus on specific grounds for unfair discrimination. Section 8 of the Act pertains to unfair discrimination based on gender, while section 9 deals with unfair discrimination related to disability. Examples of discriminatory practises that are outlawed include preventing access to opportunities, engaging in gender-based violence, withholding necessary facilities, and neglecting to remove barriers that unjustly restrict individuals with disabilities from fully participating in equal opportunities (Smit & Tessendorf, 2021).

The Mineral and Petroleum Resources Development Act

The Mineral and Petroleum Resources Development Act (MPRDA), Act No. 28 of 2002, is a key piece of legislation in South Africa that governs the exploration, mining, and processing of mineral and petroleum resources. The MPRDA was enacted to promote the equitable and sustainable development of South Africa's mineral and petroleum resources, and to ensure that the benefits of these resources are shared by all South Africans.

Key objectives of the MPRDA:

- To promote the equitable access to and sustainable development of South Africa's mineral and petroleum resources;
- To provide for the orderly and efficient exploration, mining, and processing of mineral and petroleum resources;

- To ensure that the benefits of mineral and petroleum resources are shared by all South Africans; and
- To promote the health, safety, and environmental protection of communities affected by mining activities.

The Broad-Based Black Economic Empowerment (B-BBEE)

The Broad-Based Black Economic Empowerment (B-BBEE) Act 53 of 2003 is another legislation linked to the employment of PWDs. B-BBEE aims to promote the participation of historically disadvantaged groups in the economy, including disabled individuals. By hiring and training South African Black individuals with disabilities, employers can earn B-BBEE points. According to the Daily Maverick (2020), employing individuals with disability has the potential to contribute 15 points to a company's B-BBEE scorecard. However, the legislation is often not used for its intended purpose as companies utilise loopholes in an attempt to earn points without achieving the outcomes of the B-BBEE Act. A growing trend among companies to adopt hosted learnerships. Hosted learnerships involve placing learners with disabilities at a "host employer" for the practical component of their training (Daily Maverick, 2020). While this approach allows companies to reap the B-BBEE scorecard benefits associated with disability employment without directly engaging with the learners, it undermines the true spirit and purpose of the B-BBEE Codes. The hands-off nature of hosted learnerships may appeal to some employers, but it deviates from the intended purpose of the B-BBEE Codes, which emphasise genuine integration and inclusion of individuals with disabilities in the workplace. Hosted learnerships, on the contrary, perpetuate the segregation and isolation of these individuals, further hindering their opportunities for meaningful engagement and professional development.

The Convention on the Rights of Persons with Disabilities

The Convention on the Rights of Persons with Disabilities, adopted in 2006 and opened for signature in 2007, marks a significant shift in how people with disabilities are viewed. It moves away from seeing them as objects of charity or medical attention and instead recognises them as rights-holders capable of making their own decisions. The Convention is a broad-reaching human rights instrument that applies to all PWDs and emphasises the need for adaptations to ensure their full participation in society.

The White Paper on the Rights of Persons with Disabilities (WPRPD) was approved by cabinet in December 2015 (Republic of South Africa, 2016). The vision of the WPRPD is the creation of a “free and just society inclusive of all PWDs as equal citizens”. WPRPD The WPRPD is built on nine strategic pillars:

- Strategic Pillar 1: Removing Barriers to Access and Participation
- Strategic Pillar 2: Protecting the Rights of Persons at risk of Compounded Marginalisation
- Strategic Pillar 3: Supporting Sustainable Integrated Community Life
- Strategic Pillar 4: Promoting and Supporting the Empowerment of Children, Women, Youth and PWDs
- Strategic Pillar 5: Reducing Economic Vulnerability and Releasing Human Capital
- Strategic Pillar 6: Strengthening the Representative Voice of PWDs
- Strategic Pillar 7: Building a Disability Equitable State Machinery
- Strategic Pillar 8: Promoting International Co-operation
- Strategic Pillar 9: Monitoring and Evaluation

With regards to employment of PWDs in the MMS, the Mining Charter, which is formally named the Broad-Based Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry, was initially created in 2002 and underwent revisions in 2004, 2010 and 2018 (Deloitte, 2019). This charter was established in accordance with the Minerals and Petroleum Resources Development Act (MPRDA) and serves as a mechanism to promote transformation within the mining industry. In 2018, a third revision of the Mining Charter was introduced. The 2018 Mining Charter set a compliance target of 1.5% of employees with disabilities as a percentage of all employees.

Despite the existence of policies and regulations mandating the employment of PWDs, several challenges persist in South Africa. Shared goals and missions between employers and their employees with disabilities remain unexplored (Ebrahim et al., 2022). Employers and employees with disabilities often lack a clear understanding of their shared goals and objectives, hindering effective collaboration and mutual success. Discriminatory attitudes still exist in employment processes. Prejudice and bias against PWDs continue to influence hiring decisions and workplace interactions, limiting their opportunities for advancement and equal treatment. Employers often fail to recognize the unique skills, perspectives, and contributions that PWDs bring to the workplace (Ebrahim

et al., 2022). Legislative frameworks, while well-intentioned, may not adequately address the nuances of employing PWDs (Ximba, 2016).

3.12 Summary

The comprehensive review of literature underscores the multifaceted challenges that individuals with disabilities (PWDs) encounter in securing and maintaining employment. Organisational factors, including inaccessible facilities, attitudinal barriers, and policy-related hindrances, contribute significantly to the difficulties faced by PWDs. Physical obstacles, lack of necessary facilities, and policy-related barriers, as identified by various studies, impede the integration of PWDs into the workforce. The reluctance of managers, coupled with a lack of access to job information and negative stereotypes, further exacerbates the barriers to employment. The literature consistently highlights the impact of corporate culture on employers' attitudes and actions regarding PWDs. Misconceptions about the high cost of accommodations, fear of legal ramifications, and lack of awareness regarding available accommodations create a significant hindrance. The study emphasises the need for educational and marketing interventions to improve employers' attitudes and intentions toward hiring individuals with disabilities.

Industries like mining and construction present unique challenges, with physically demanding environments, safety concerns, and competitive, masculine cultures limiting the inclusion of PWDs. The fear of increased safety hazards and resistance from existing staff further discourages employers from integrating PWDs. Legal requirements for equal employment opportunities exist, but their enforcement remains inconsistent, contributing to the ongoing marginalisation of PWDs. Personal factors, such as low self-esteem, psychosocial challenges, and cultural myths, further complicate the employability of PWDs. Negative attitudes, stigma, and discrimination impact mental health, discouraging individuals from seeking employment or career advancement. The literature suggests that education and employment opportunities play a crucial role in mitigating the impact of stigma on self-esteem and depression among PWDs.

In conclusion, the synthesis of diverse studies highlights the interconnectedness of personal, organisational, and social factors influencing the employment landscape for PWDs. The prevailing challenges call for a paradigm shift in organisational culture,

increased awareness, and the implementation of inclusive policies to create a conducive environment for the employment, training, and retention of individuals with disabilities. Moreover, the role of transformational leadership in fostering disability inclusion and the importance of educational and training initiatives emerge as key considerations for addressing the complex web of challenges faced by PWDs in the workforce.

CHAPTER FOUR: FACTORS IMPEDING ATTAINMENT OF EQUITY TARGETS WITH RESPECT TO PEOPLE WITH DISABILITIES IN THE MINING AND MINERALS SECTOR

4.1 Introduction

The purpose of this chapter is to analyse data gathered through conducting a systematic review of existing documents to gather information on the barriers that hinder attainment of employment targets of PWDs. This chapter delves into the intricacies in the social, organisational, and personal aspects affecting PWDs through their lived experiences and documented company perspectives. It involves a systematic examination and analysis of the collected data to draw conclusions and address the objectives of the study. In the analysis of data, thematic coding was considered, and utilised. In answering the research questions, this study looked at matching the findings with specific research questions or objectives of the study, which is investigating the barriers to attainment of equity targets with respect to PWDs in the MMS. Further, the synthesis and interpretation of findings highlight significant patterns or themes that emerge from the data. In this, regard key findings are identified. By the same token, explanation, and interpretation of what findings suggests or imply, relating them back to the research questions and literature, is dealt with. This research study adopted the Interpretivist paradigm, which emphasises the importance of understanding individuals' lived experiences in light of reality being constructed and subjective. It assumes that individuals construct their realities (Burns *et. al*., 2022). The interpretivist paradigm further assumes that reality is subjective, multiple and socially constructed. This essentially means that one can understand another person's reality through their experiences of that reality, which can be different from another person's, due to different historical and social perspectives. This therefore meant the people around which the study is conducted must be directly giving input in terms of how they experience the Mining and Minerals Sector.

The findings are aligned with the following objectives of the study:

- To understand the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs;

- To realise training interventions that are put in place in the MMS to enable employment of PWDs.
- To identify factors influencing the attraction and retention of employees with disabilities in MMS; and
- To recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS.

Aligning the findings with the objectives has allowed the research team to draw practical implications from the results and facilitate quality control throughout the research process. This was done by consistently matching the methods, the data collection and analysis strategies to maintain quality and rigour of the study. The following sub-sections provides further details.

4.2 To realise training interventions that are put in place in the MMS to enable employment of PWDs.

Whilst the MMS is grappling with the challenge of being unable to attract and retain PWDs, amongst the areas of concern, is capacity development, to enable retention. It therefore becomes important for the sector to establish what training interventions are being put in place for inclusivity. The study reveals that this was achieved through analysis of documents such as training plans and training report as well as interviews with HR experts.

4.2.1 Findings from documents analysis

This analysis includes training provided by Mining Qualification Authority (MQA) and companies in the MMS for employed and unemployed individuals, including people with disabilities (PWDs). South Africa is a non-racial and non-discriminatory country through its Constitution, Act 108 of 1996. Therefore, training programmes provided are not selective in terms of disability avoiding exclusion and isolation. It is against this background that this chapter is not specific to PWDs but gives an overview of capacity development in the sector.

The analysis will outline the following:

- The number of individuals trained through apprenticeships and learnerships;
- The type of training that was received by individuals.

- The number of training interventions introduced by MQA and companies in the MMS; and
- The profile of PWDs in the MMS including the type of training that they have received.

The documents reviewed include the Sector Skills Plans (SSPs) drafted by MQA for 2018, 2019, 2021 and 2022 and 2023. For the year 2020, not much was going to be found as result of COVID– 19 pandemic which resulted in lockdown restrictions, prohibiting gatherings (trainings, workshops etc.). Furthermore, the analysis also utilised Workplace Skills Plans (WSPs) and Annual Training Reports (ATRs) data for the period between 2018 and 2023.

- Learnerships

In 2018 academic year, a total of 3925 learners enrolled in MQA-funded non-artisan development learnerships, which included both unemployed and employed community members. Of these, 1404 unemployed learners successfully completed their non-artisan development learnerships, meeting the set target. Additionally, 899 employed learners finished their learnerships, surpassing the target by 112%. Figures 4.1 and 4.2 illustrate the top ten completed learnerships (excluding artisan development) by employed and unemployed learners in 2018. The leading three learnerships in both categories focused on core mining skills at stage one of mining activities, specifically mining operations for underground hard rock, jewellery manufacturing, and occupational health, safety, and environment, as well as diamond and mineral processing.

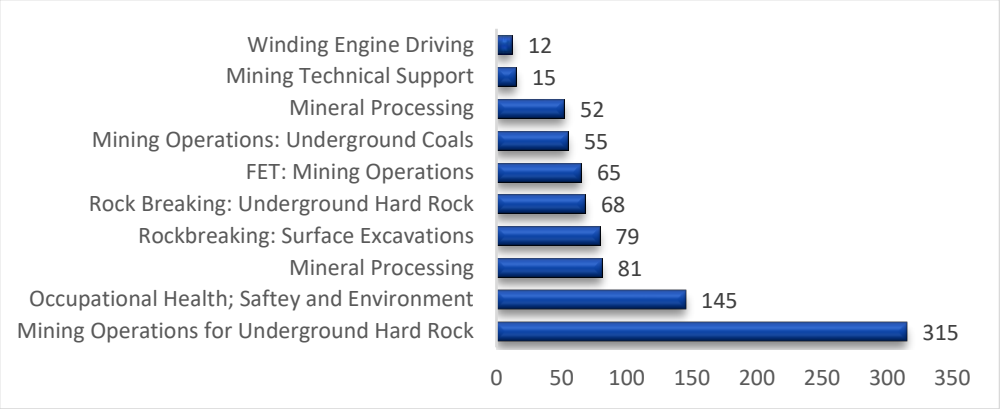


Figure 4.1: Learnerships completed by employed individuals: 2018.

The above diagram gives an indication that training was pre-dominantly in mining operations for teams that work underground. This is exclusive of PWDs due to the nature and intensity of the work. The second layer that is prominent is the occupational health and safety, which will give ease to everybody in the sector. Whilst the MMS highlights its interest to attract and retain, the target groups of the training programs above, do not talk to the group they seek to attract and retain. According to Harvey (2020), tailoring training programs for individuals with disabilities is crucial for several reasons:

- To ensure inclusivity, effectiveness and accessibility;
- Customised training promotes inclusivity, creating an environment where individuals with disabilities feel valued and supported;
- Tailoring training material and methods to accommodate diverse needs helps in fostering a sense of belonging and participation; and
- To cater to different learning styles and preferences.

Adherence to the above measures would have benefited the MMS in attracting and retaining PWDs.

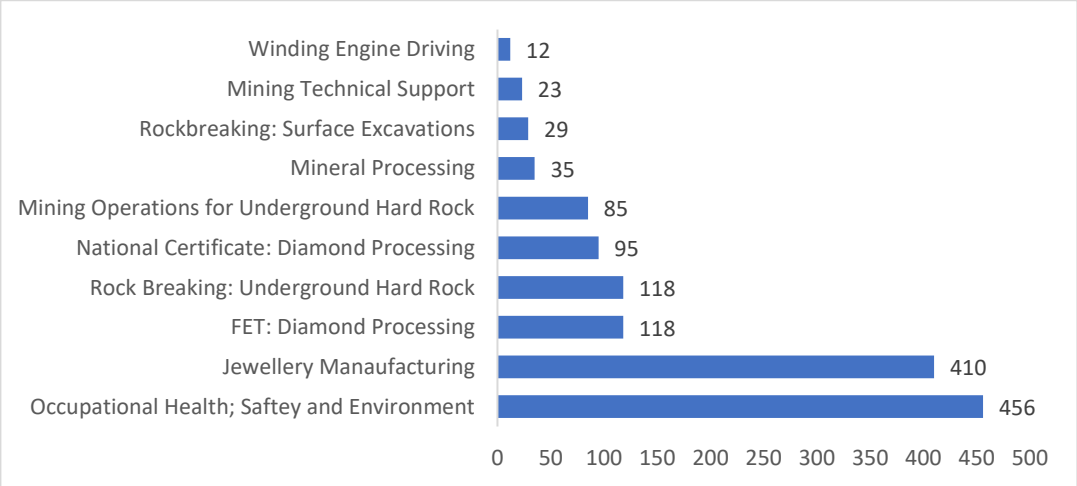


Figure 4.2: Learnerships completed by unemployed individuals: 2018.

The same observations that were made in figure 4.1 are relevant to figure 3.2 above. Notably, if MMS was intentional about changing the status quo, it should begin in changing the picture above, where unemployed beneficiaries exceed the employed.

As for the completion of learnerships, the MQA had initially set a target of 900 employed learners and 550 unemployed learners in 2018. However, these targets were reduced to

150 and 300, respectively, in 2019. It is worth noting that the MQA consistently achieved the set targets for both reporting years of 2018 and 2019. The top three completed programs, it is noteworthy that employed learners primarily participated in core mining programs, while unemployed learners were mostly engaged in Jewellery Manufacturing and Health and Safety programs.

Table 4.1: Top 3 learnerships completed by individuals: *2019.*

Employed learners	**Unemployed learners**
1. Occupational Health, Safety and Environment	1. National Certificate in Jewellery Manufacturing
2. National Certificate Mining Operations for Underground Hard Rock	2. National Certificate Diamond Processing
3. National Certificate Rock Breaking Underground Rock	3. National Certificate Occupational Health, Safety and Environment

Source: MQA APR (June 2019)

In 2019, a target was set to place 150 Technical and Vocational Education and Training (TVET) National Certificate Vocational (NCV) graduates into a *work placement program with host employers*. This target was met, with a total of 151 TVET NCV graduates entering the program. Additionally, the completion target for the work placement program at TVET colleges was successfully achieved, with 192 completions out of a target of 50. On the other hand, work exposure is also provided to university undergraduate students, and in 2019/20 financial year their entry targets (550) were underachieved by 75 at 475. The completion target of 300 was achieved at 324. The non-achievement in the number of undergraduates entering a workplace experience programme could be attributed to challenges experienced in securing sufficient and available workplaces to host new learners. The top 3 programs completed in the 2019/20 financial year mirror those of the

previous financial year. This is an indication that industries are not welcoming to new entrants, even for the purpose of gathering work experience. Again, the 2019/20 outcomes point to an employment sector that is not ready.

Table 4.2: Top 3 learnerships completed by individuals: 2021

Employed learners	Unemployed learners
1. National Certificate Mining Operations for Underground Hard Rock.	1. National Certificate in Jewellery Manufacturing
2. National Certificate Minerals Processing.	2. National Certificate Occupational Health, Safety and Environment
3. National Certificate Rock Breaking Underground Rock.	3. National Certificate Rock Breaking Underground Rock

In 2021, MQA targeted to have 400 employed learners and unemployed learners enrolled in the learnership program, but this number was increased to 800 and 900 respectively in 2022. With regards to the completion of learnerships, the MQA set a target of 350 for employed learners and 200 for unemployed learners in 2021. These targets were then adjusted to 300 and 350 respectively in 2022. The top 3 completed programs for both employed and unemployed learners are shown in table 5.

Table 4.3: Top 3 learnerships completed by individuals: 2022

Employed learners	Unemployed learners

1. National Certificate Mining Operations for Underground Hard Rock.	1. National Certificate Occupational Health, Safety and Environment.
2. National Certificate: Minerals Processing: Lump Ore Beneficiation.	2. National Certificate in Jewellery Manufacturing.
3. National Certificate: Rock Breaking Underground Hard Rock.	4. National Certificate: Diamond Processing: Bottom Polishing.

The above table gives a reflection of low levels of motivation, a gap that MMS can intervene on and bring the much-needed change.

In 2023, MQA set a target of 415 for employed learners, a target that was exceeded as 552 individuals enrolled for the program. Amongst the unemployed individuals, the target (1000) was also exceeded (1531). The above statistics point to the concerted effort to capacity building by MQA and its stakeholders. Thus, these confirms that lack of capacity and resources is not a topic under discussion when barriers are discussed. However, in all these years there is perpetual exclusion of PWDs.

- Apprenticeships

It is widely argued that the shortage of skilled artisans is a major obstacle to both employment creation and economic growth in South Africa. The MQA Artisan (apprenticeship) Development Projects' targets are established by the Department of Higher Education and Training (DHET) and are in line with the HRD Strategy for South Africa (2001), IPAP2, NGP, NSDP, and Chapter 9 of the NDP. A total of 1535 learners participated in MQA-funded apprenticeship learnerships, exceeding MQA's target by 102%. However, only 1478 learners completed their apprenticeship learnerships during the same year, falling short of MQA's target by 82%. This shortfall was attributed to a lack of learners entering the pipeline in previous years. Table 3.4 provides a breakdown of the apprenticeship learnerships entered and completed in 2018.

Table 4.4: Apprenticeships 2018

Occupation	Learners enrolled	Number of learners completed

Boilermaker	103	120
Diesel Mechanic	132	188
Electrician	372	441
Fitter	218	311
Fitter and Turner	56	36
Instrument Mechanic	46	62
Millwright	85	70
Rigger	43	73
Welder	127	106
Diamond and Gemstone Setter	64	11
Goldsmith	238	29
Jewellery Designer	0	4
Diamond Cutter	0	27
Earth Moving Mechanic	51	0
Total	1535	1478

In 2018 MQA set a target of enrolling 275 learners in the apprenticeship program, but this target was exceeded with a total of 320 learners. The top three fields that learners entered were electrician (57), fitter (49), and welder (45). Additionally, the target for completions was successfully achieved, with a total of 1306 completions out of a target of 1300. Similarly, to the programs entered, the top programs completed were electrical (290), fitting (including machining) (282), and diesel mechanic (178).

In 2019 MQA set a target of 800 learners, and it exceeded it by 111. The top three fields in which learners enrolled were electrician (240), followed by fitter (189), and diesel mechanic (106). The target for completions was 750, but the actual number of completions reached 950. Similarly, the top programs completed in 2019 were electricians (258), fitters (187), and diesel mechanics (167). The target for completions in 2020 was 650, and this was achieved by a total of 652 completions.

The target for artisans entering a program increased from 750 in 2021 to 1280 in 2022, surpassing the targets for both years. The targets for artisans completing a program in

2021 were 650, which decreased to 400 in 2021. Once again, both targets were exceeded. The top 3 fields in 2021 that artisan learners entered were the National Certificate Electrical - Metalliferous (298), National Certificate Fitting (including machining) - Metalliferous (175), and Goldsmith (133). Furthermore, in 2021, the target for completions was set at 400, but 526 completions were accomplished. Likewise, in terms of programs completed, the top three programs in 2022 were the National Certificate: Electrical: Metalliferous (55), National Certificate: Fitting (including machining): Open Cast (49), and National Certificate: Electrical: Opencast (43). During the 2022/2023 financial year, the target for the apprenticeship program was 1000 learners, which was achieved as 1522 learners were enrolled. With regards to completion, 670 learners completed the program against a target of 500 students.

Workplace Skills Plans/Annual Training Reports

Workplace Skills Plans (WSPs) and Annual Training Reports (ATRs) serve the purpose of ascertaining the prevailing and forthcoming learning and qualifications requirements within the sector, thereby directing the sector's skills planning endeavours. Training is widely acknowledged as an essential element for the advancement of the industry, encompassing novel tools and delivery systems.

Table 4.5: Training provided annually.

Year	Number
2018	515139
2019	879568
2021	550972
2022	506753
2023	744363

Table 4.5 shows the number of individuals who received training annually between 2018 and 2023. The highest number was recorded in 2019 (879568). The number of individuals trained during 2021 and 2022 were lower possibly because of the Covid-19 pandemic. In 2023, there was a significant increase in the number of individuals trained.

Table 4.6: Top 5 training programmes offered.

2018	
Training programme	**Percentage**
Other short courses	28.72%
Safety, Supervisory/ Leadership and Management Skills	26.22%
Mining Core	13.08%
Engineering Core	7.55%
Soft Skills (people specific training such as HR)	4.51%
2019	
Short Course	71.66%
Job Specific Development Programme	15.45%
Skills Programme	4.84%
Certificate	4.75%
Learnership	0.79%
2021	
Short Course	64.80%
Job Specific Development Programme	23.13%
Skills Programme	4.63%
Certificate	3.44%
Learnership	1.10%
2022	
Short Course	62.57%
Job Specific Development Programme	24.70%
Skills Programme	4.74%
Certificate	3.97%

Learnership	1.24%
2023	
Short Course	70.57%
Job Specific Development Programme	16.58%
Certificate	5.98%
Skills Programme	3.26%
Learnership	1.44%

Table 4.6 shows the top 5 training programmes done between 2018 and 2023. Short course was the most popular programme during the period. It recorded over 50% in all the years. Job Specific Development Programme was the second most popular programme. Other programmes of note are certificate, skills programme and learnerships.

Table 4.7: Specific training courses

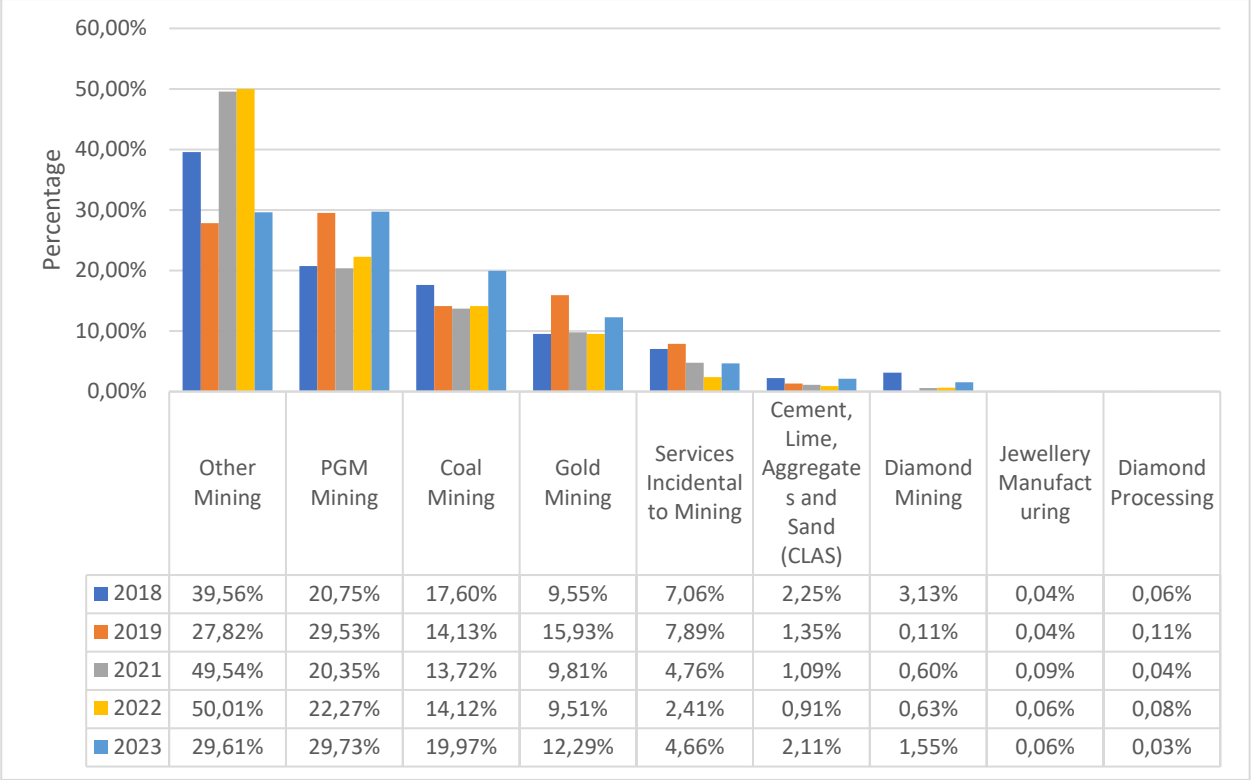
2018	
Training course	**Percentage**
Other short courses	28.72%
Safety, Supervisory/ Leadership and Management Skills	26.22%
Mining Core	13.08%
Engineering Core	7.55%
Soft Skills (people specific training such as HR)	4.51%
2019	
Safety, Supervisory/ Leadership and Management Skills	36.23%
Other short courses	20.70%
Mining Core	12.41%
Engineering Core	5.99%
Soft Skills (people specific training such as HR)	4.26%
2021	
Safety, Supervisory/ Leadership and Management Skills	18.70%
Other short courses	17.03%
Mining Core	10.46%

Engineering Core	4.75%
Soft Skills (people specific training such as HR)	2.56%
2022	
Other short courses	12.62%
Safety, Supervisory/ Leadership and Management Skills	10.00%
3 days or more programme, please specify in next column	6.37%
Mining Core	5.70%
Engineering Core	2.64%
2023	
Safety, Supervisory/ Leadership and Management Skills	38.31%
Other short courses	17.00%
Mining Core	13.40%
Engineering Core	12.25%
Soft Skills (people specific training such as HR)	4.47%

Table 4.7 highlights the specific skills that individuals received training between 2018-2023. The most popular skills include Safety, Supervisory/ Leadership and Management Skills, Mining Core, Engineering Core and Soft Skills (people specific training such as HR).

Figure 4.3 shows training of MMS individuals by sub-sector. Most of the training is in the “other mining” sub-sector. This is followed by PGM mining, Coal Mining and Gold Mining. Training programmes per province are shown on table 5. The figures reflect mining activities in the provinces to a large extent. The provinces with minimal mining activities such as the Eastern Cape and Western Cape had the lowest number of training programmes. Training programmes are higher in North-West, Gauteng, Limpopo, and Mpumalanga. The reason for lower number of training programmes is that there are minimal mining activities in those provinces. Mining contributes the least to GDP in Eastern Cape and Western Cape

Figure 4.3: Training by sub-sector



	Other Mining	PGM Mining	Coal Mining	Gold Mining	Services Incidental to Mining	Cement, Lime, Aggregates and Sand (CLAS)	Diamond Mining	Jewellery Manufacturing	Diamond Processing
2018	39,56%	20,75%	17,60%	9,55%	7,06%	2,25%	3,13%	0,04%	0,06%
2019	27,82%	29,53%	14,13%	15,93%	7,89%	1,35%	0,11%	0,04%	0,11%
2021	49,54%	20,35%	13,72%	9,81%	4,76%	1,09%	0,60%	0,09%	0,04%
2022	50,01%	22,27%	14,12%	9,51%	2,41%	0,91%	0,63%	0,06%	0,08%
2023	29,61%	29,73%	19,97%	12,29%	4,66%	2,11%	1,55%	0,06%	0,03%

Table 4.8 below shows the training per Province.

***Table 4.8: Training received by** Province.*

PROVINCE	2018	2019	2021	2022	2023
Gauteng	22.91%	33.74%	15.72%	14.63%	31.33%
Limpopo	20.03%	12.27%	17.03%	18.87%	11.16%
Northern Cape	17.97%	7.03%	13.79%	13.45%	13.56%
Mpumalanga	16.66%	13.42%	21.27%	19.92%	9.37%
North-West	16.10%	28.33%	24.37%	24.67%	23.47%
KwaZulu Natal	2.99%	1.15%	3.46%	2.42%	1.86%
Free State	2.29%	3.01%	2.61%	4.35%	7.07%
Western Cape	1.02%	1.00%	1.54%	1.49%	2.19%
Eastern Cape	0.03%	0.04%	0.22%	0.20%	0.00%
Grand Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

This analysis is a clear indication that MMS are not doing much on the training of PWDs. In this regard, some participants on the IDI, believe that its it a challenged to place PWD, even after providing them with necessary training. The participant responded as follows:

"We have got the money to train but placing then becomes a problem".

Employer interview, 2024 (Coal Mining)

4.3 Understanding the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs.

4.3.1 The nature of employment profile of PWDs employed

This section provides an analysis of the profile of PWDs including the type of training that they have received. The analysis utilises WSP/ATR data for the period 2018 to 2022. It should be noted that the 2023 WSP/ATR does not disaggregate information on training based on disability. However, there is data available on the number PWDs employed in the MMS.

Table 4.9: Profile of PWDs employed.

Disability/Year	2018	2019	2021	2022	2023
No	99.13%	99.26%	98.75%	99.16%	98.67%
Yes	0.87%	0.74%	1.25%	0.84%	1.33%
Total	100.00%	100%	100.00%	100.00%	100.00%

Table 4.9 shows the percentage of PWDs employed as a percentage of total employees for the period 2018-2023. The most recent Mining Charter of 2018, as amended has set an employment equity target of at least 1.5% of individuals with disabilities as a percentage of total employees (Kincaid & Smith, 2021: p). According to MQA (2021), the employment of PWDs remains a concern with minimal changes in the percentage those employed between 2016 and 2021. However, it should be noted that there have been improvements between 2019 and 2023. MQA (2015), emphasised that it is imperative for the MQA to take a more proactive role in facilitating the acquisition of skills by people with disabilities, enabling them to enter the sector's workforce. Employment equity, especially for women and individuals with disabilities, is identified as a crucial catalyst for change.

Table 4.10: Percentage of PWDs trained

Disability/Year	2018	2019	2021	2022
No	99.52%	99.31%	98.92%	99.38%
Yes	0.48% (2296)	0.69% (6475)	1.08% (5532)	0.62% (3610)
Total	100.00%	**100.00%**	**100.00%**	**100.00%**

Table 4.10 shows the training received by PWDs as a percentage of total employees in the MMS. The number of PWDs trained fluctuated between 0.48% and 1.08%. The figures reflect the number of PWDs that are employed in the MMS. The number of PWDs trained reached 6475 in 2019, however, given the high total number of workers trained in 2019, the percentage is lower at 0.69% compared to 2021 (1.08%). The lower number of PWDs trained in 2021 and 2022 can be attributed to the effects of the Covid-19 pandemic and the poor performance of the world economy which impacted negatively on the MMS.

Table 4.11: Top 5 qualifications obtained by PWDs.

Qualification type	2018	2019	2021	2022
Short Course	1665	5004	2117	2173
Job Specific Development Programme	197	228	1651	461
Learnership	116	279	429	458
Skills Programme	107	88	149	72
Certificate	88	603	962	79

Table 4.12 shows the top 5 qualifications obtained by PWDs. Short Course was the most popular qualification for PWDs in all the years of the chose period. The other qualifications that make up the top 5 are Job Specific Development Programme, Learnership, Skills Programme and Certificate. With regards to specific skills obtained, Safety, Supervisory/Leadership and Management Skills was the most popular in 2018 and 2019 and 2022. However, in 2021 Mining Core was the most popular skill individuals received training on.

Table 4.12: Top 5 skills obtained by PWDs

Type of skill	2018	2019	2021	2022
Safety, Supervisory/ Leadership and Management Skills	324	2139	519	589
Other short courses	287	842		302
Mining Core	238	887	901	654
Engineering Core	99	414		
Soft Skills (people specific training such as HR)	83			
1-day programme		315	461	
Hand and Finger Injury			602	
Isolation and lockout			442	
Computer skills				248
National Certificate in Business Administration Level 4				130

Table 4.13 highlights the training received by PWDs per sub-sector. Between 2018 and 2019, most of the training was undertaken by PWDs in PGM Mining. In 2021 and 2022, most of the training was in Coal Mining and Other Mining respectively. PGM Mining, Other Mining and Coal Mining were consistently the top 3 sub-sectors with the most training.

Table 4.13: Training of PWDs by sub-sector

Sub-sector	2018	2019	2021	2022
PGM Mining	799 (34.80%)	4064(62.76%)	1245 (22.51%)	1184 (32.80%)
Other Mining	599 (26.09%)	851 (13.14%)	973 (17.59%)	1288 (35.68%)

Coal Mining	378 (16.46%)	521 (8.05%)	2864 (51.77%)	679 (18.81%)
Cement, Lime, Aggregates and Sand (CLAS)	219 (9.54%)	165 (2.55%)	72 (1.30%)	67 (1.86%)
Services Incidental to Mining	131 (5.71%)	212 (3.27%)	156 (2.82%)	170 (4.71%)
Diamond Mining	104 (4.53%)	328 (5.07%)	37 (0.67%)	27 (0.75%)
Gold Mining	46 (2.00%)	282 (4.36%)	127 (2.30%)	59 (1.63%)
Diamond Processing	15 (0.65%)	46 (0.71%)	36 (0.65%)	87 (2.41%)
Jewellery Manufacturing	5 (0.22%)	6 (0.09%)	22 (0.40%)	49 (1.36%)
Grand Total	**2296 (100.00%)**	**6475 (100.00%)**	**5532 (100.00%)**	**3610 (100.00%)**

Table 4.14 shows training of PWDs by province. The data shows that training is related to mining activity and number of PWDs employed in the particular provinces. The North-West province recorded the highest number of PWDs trained in 2018, 2019 and 2022. In 2021, Mpumalanga recorded the highest number. The data mirrors that of training provided to all individuals regardless of disability as shown earlier.

Table 4.14: Training of PWDs by Province

PROVINCE	2018	2019	2021	2022
North-West	974 (42.42%)	4061 (62.72%)	1339 (24.20%)	1256 (34.77%)
Gauteng	424 (18.47%)	966 (14.92%)	512 (9.26%)	559 (15.48%)
Mpumalanga	303 (13.20%)	471 (7.27%)	2837 (51.28%)	388 (10.74%)
Northern Cape	266 (11.59%)	486 (7.51)	337 (6.09%)	488 (13.51%)
Limpopo	238 (10.37%)	344 (5.31%)	337 (6.09%)	673 (18.63%)
KwaZulu Natal	34 (1.48%)	40 (0.62)	73 (1.32%)	68 (1.88%)
Western Cape	30 (1.31%)	72 (1.11%)	51 (0.92%)	82 (2.27%)
Free State	27 (1.18%)	29 (0.45%)	43 (0.78%)	93 (2.57%)
Grand Total	**2296 (100.00%)**	**6475 (100.00%)**	**5532 (100.00%)**	**3612 (100.00%)**

The purpose of this section was to conduct an analysis to highlight the number of individuals that were trained through apprenticeships and learnerships, the type of training that was received by individuals, the number of training interventions introduced by MQA and companies in the MMS and the profile of PWDs.

The analysis showed that MQA met most of the targets with regards to enrolments and completion of training programmes. The leading learnerships in both categories focused on core mining skills at stage one of mining activities, specifically mining operations for underground hard rock, jewellery manufacturing, and occupational health, safety, and environment, as well as diamond and mineral processing. With regards to apprenticeships, the most popular training programmes enrolled for and completed were

National Certificate Electrical - Metalliferous, National Certificate Fitting (including machining) - Metalliferous, and Goldsmith.

Short course was the most popular programme during the period as it recorded over 50% in all the years. Job Specific Development Programme was the second most popular programme. Other programmes of importance are certificate programmes, skills programmes and learnerships. The most popular skills include Safety, Supervisory/ Leadership and Management Skills, Mining Core, Engineering Core and Soft Skills (people specific training such as HR). With regards to the sub-sectors, most of the training programmes were in the “other mining” sub-sector. This is followed by PGM mining, Coal Mining and Gold Mining. The provinces with minimal mining activities such as the Eastern Cape and Western Cape recorded the lowest number of training programmes. Training programmes are higher in North-West, Gauteng, Limpopo, and Mpumalanga.

The number of PWDs trained fluctuated between 0.48% and 1.08%. The figures reflect the number of PWDs that are employed in the MMS. The number of PWDs trained reached 6475 in 2019, however, the given the high total number of workers trained in 2019, the percentage is lower at 0.69% compared to 2021 (1.08%). The lower number of PWDs trained in 2021 and 2022 can be attributed to the effects of the Covid-19 pandemic and the poor performance of the world economy which impacted negatively on the MMS. The number of PWDs employed remains lower than the 1.5% stipulated in the Mining Charter. However, it should be noted that there have been improvements since 2019.

Short Course was the most popular qualification for PWDs in all the years of the chose period. The other qualifications that make up the top 5 are Job Specific Development Programme, Learnership, Skills Programme and Certificate. With regards to specific skills obtained, Safety, Supervisory/Leadership and Management Skills was the most popular. PGM Mining, Other Mining and Coal Mining were consistently the top 3 sub-sectors with the most training. Training of PWDs was greater in North-West, Gauteng, Mpumalanga.

4.4 To understand the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs.

Some employers believed that the nature of work *and the nature of disability* does affect the employment of PWDs. The two employers commented that:

"*With disability we found it very difficult to hire people with disabilities for the simple reason that that most of our work that we do here is physical. At the moment you only have one person with disability."*

Employer Interview, 2024 (Mining)

Another participant from Jewellery industry commented on the same matter as follows:

"*Male and females and deaf learners, so we it's obviously have to learn sign language, the nature of the disability and ones understanding of their circumstances can be a barrier, however, if MMS conducts outreach programmes and delve deep into the barriers, an improvement can be seen*".

Employer Interview 2024, Jewellery industry

Noteworthy examples in the diamond mining sector include a sales representative with muscle dystrophy, a sales representative with one arm, an accountant with one leg, and a draughtsman with a leg impairment.

Employer Interview, February 2024 Diamond Mining (HR Expert) PWD

Again, in addressing PWDs, the gender balance ought to be created and provide equal opportunities for both disabled men and women.

Whilst the nature of work for people with disabilities can vary widely depending on the type of disability, individual capabilities, and the accommodations provided by employers. It is recommended that employers should consider diverse abilities, adaptive technologies, reasonable accommodation, inclusive work environments and remote work opportunities, amongst others (Luu, 2019).

Equal opportunities

Providing equal opportunities in an organization creates a culture that can lead to retention and a healthier environment. It is that culture that brings positive spinoffs, one of which is profitability. In this, one responded stated:

"I work with people who are partially blind at managerial and administration level, we develop learning material for schools"

Employer interview, 2024 (Mining)

"*Female in HR, disabled by accident-broken back, Male in wheelchair" and the bathrooms are not user-friendly to PWDs"*

Interview, January 2024 (IDI) Gold Mining. Sibanye HRTC Transactional Centre

The above is an indication of fragmentation of the need for inclusivity and organisational readiness in term of accommodation for PWDs. The Goals mining sub-sector needs to provide suitable infrastructure if it wants to retain PWDs, not only out of respect for human dignity but as a basic human right.

"There are PWDs in the Information Technology department and we usually try to accommodate them on administration". "There is also a Warehouse attendant and a Draughtsman"

Employer Interview, January 2024. Diamond Mining (HR Expert) PWD

This is an indication of low representation of PWDs within the MMS. This justifies the need to conduct the study so that the sector plays its role to ensure all sectors within communities are participating in the mainstream economy.

"PWDs are distributed as follows:

-Few people with prosthesis working underground; Clerical positions/office workers; Female mechanic; Switchboard operator; Procurement officer"

Organised Labour, Interview February 2024 (UASA) Divisional Manager

Generally, what type of PWDs are employed in the sector(department)

- Semi- deaf.

- Wheelchairs
- 2 Officials who are deaf.
- And department has 14 people who are disabled

Stakeholder Interview, February 2024 (Department of Mining Resources and Energy) HR Expert

The respondent below raised their observation of preference to women against PWDs on employment opportunities. Secondly, is that the competency tests, in their view, should be waivered on PWDs.

-In responding to the current state of PWDs in the sector, the respondent had this to say:

-Unfairness to higher positions due to disability; Women prioritized more than PWDS;

-No training, programs, or bursaries for PWDs;

- "The management should stop treating us like normal people, or sometimes even worse than the normal people".

-PWDs need to be hired without the psychometric tests.

Employee Interview, February 2024. Gold Mining- Protection Services Operation

All races in the employ of the organisation live with different disabilities. These include:

Wheelchair bound, Communication disability, Impaired speech.

Organised Labour, Interview February 2024 (NUMSA) Training Provider

Summary of Employer Interview (February 2024, Portland Quarry):

Occupational Distribution of PWDs:

The interviewee highlighted various occupations commonly occupied by people with disabilities within their organization, including sales representatives, accountants, and draughtsmen. These individuals possess a range of educational backgrounds, from diplomas to degrees, and varying lengths of work experience.

Employer Interview, February 2024 Diamond Mining (HR Expert) PWD

Summary of Interview with PWDs in Mining

The interviewee discussed their journey into the mining sector, particularly within the Mining and Marine Services (MMS) company, as a person with disabilities (PWDs).

-Previous Experience: Before joining MMS, the interviewee worked in security. Finding a job within MMS was relatively normal for them.

-Challenges in Applying: The interviewee did not face any challenges when applying for a job within MMS due to their 17 years of experience in the sector.

-Experience as a PWDs Employee: They highlighted opportunities for growth, supportive programs, and non-discriminatory policies within MMS. The physical working environment and occasional need for accommodations like sunblock were mentioned. They emphasised the importance of PWDs challenging themselves and the company's support in addressing challenges.

-Attraction to MMS: The interviewee was attracted to MMS due to their interest in mining and the sea, as well as the prominence of mining in their small town.

-Achieving Employment Targets for PWDs: The interviewee believes MMS can reach employment targets for PWDs, citing opportunities available for those willing to learn and challenge themselves.

-Retention in the Industry: They expressed their personal interest in the industry and the accommodating nature of MMS. Retention depends on individual preferences and opportunities provided by the company.

-Improved Strategies for PWD Absorption: Suggestions included personal growth opportunities, flexible work arrangements, involvement in planning, training, and development, and fostering an inclusive organizational culture.

-Increasing Employment Chances: PWDs were encouraged to have an open mindset, refrain from limiting themselves, and actively seek available opportunities.

-Employer Practices and Policies: The interviewee noted the importance of making opportunities widely available and avoiding discrimination. Employer initiatives and community involvement were emphasised.

-Beyond the Employer: The interviewee's involvement in the sea rescue team highlighted additional platforms for PWD engagement.

-Bouncing Back and Self-care: The interviewee discussed their resilience, family support, and the assistance provided by their employer.

-Recommendations for Employers: Employers were encouraged to conduct workshops, promote positive mindsets, and emphasise PWDs' capabilities.

Employee Interview, February 2024 (PWD) Ice Mining

The above respondent points to an organisation prepared with a clear organisational culture, policies and action plans in place. It is equally important to note that, while the latter is important, implementation and continuous feedback on the targets group is imperative.

Analysing the interview below, it provides valuable insights into the experiences of individuals with disabilities within the mining industry and suggests areas for improvement in supporting and retaining employees with disabilities within MMS.

The interview provides insight into the experiences and perspectives of an HR Officer within the mining industry who also has a disability. Here's an analysis based on the provided information:

-Challenges in Finding Suitable Employment:

The interviewee highlights the difficulties faced in finding employment, especially for individuals with disabilities. They note that even with a visible disability, finding work is challenging, particularly due to concerns about accommodating the disability in the workplace.

-Challenges within MMS:

The interviewee suggests that having a non-visible disability might make it slightly easier to secure a job within MMS, as employers may not immediately see the disability. However, they still face challenges due to preconceived notions about disabilities during the application process.

-Experience as an Employee with Disabilities within MMS:

The interviewee describes a positive experience within MMS, noting that the company is well set up for employees with disabilities. They mention specific accommodations made for employees with physical and emotional disabilities, such as adapting machinery and creating a user-friendly environment.

However, they also express that more can be done to retain employees with disabilities, suggesting that MMS could improve training and foster a culture of respect among all employees.

-Retention Strategies:

The interviewee acknowledges that while MMS has made efforts to accommodate disabilities, they believe more can be done to retain employees with disabilities. They emphasise the importance of creating a safe and supportive environment and providing benefits such as medical assistance and pension funds.

-Absorption of PWDs in MMS:

The interviewee suggests that MMS could improve its strategies for absorbing people with disabilities by focusing on providing relevant training and employment opportunities rather than merely meeting BEE quotas. They advocate for tailored learnership programs that lead to permanent employment based on individual capabilities.

-Recommendations for People with Disabilities Seeking Employment:

The interviewee advises individuals with disabilities to focus on improving their skills and qualifications to increase their chances of employment within the sector. They emphasise the importance of having the necessary licenses and skills required for specific roles.

-Self-Care and Support:

The interviewee discusses the importance of self-care and support within MMS, mentioning initiatives such as allowing staff to work from home and providing self-healing time for individuals facing workplace challenges. They highlight the importance of creating a supportive work environment for employees with disabilities.

Employee Interview, February 2024 (CLAS-Plastistone) HR Expert PWD

The participants portrayed a positive experience within MMS, highlighting opportunities for PWDs and suggesting ways to further enhance inclusivity and support within the mining industry.

Relevance of training programs for PWDs

The respondent below highlights opportunities within the mining sector, that can be provided to people with disabilities. This therefore requires decisive leadership to provide these opportunities.

“I deal with young people with disability, these young people are between the ages of 18 and ages of 29. We conduct integrated learning for them, and we prepare them for work. We prepare them for interviews, we help them structure their CVS and get them ready

for a workplace. A person can be a Packer, dispatcher or controller depending on the type of disability".

Employer Interview, 2024 (Multiple Organisations)

Classification of positions and catering to the abilities of PWDs in terms of mobility, comfort and ease is an important element if changes are to be made. Organisations cannot plan, adjust their budgets while unclear about who they are providing support to. Statistics therefore serve as a support in the planning process. A tool that can assist MMS is determining from the start positions that can be done by people with special needs and tailoring specifications to them.

4.5 Factors influencing the attraction and retention of employees with disabilities in the MMS

In-depth interviews were conducted with employers, HR experts and PWDs to establish factors influencing the attraction and retention of employees with disabilities in the MMS.

To give effect to the objectives of the study, interviews were conducted to get information that will be linked to providing solutions to the challenges in the Mining and Minerals Sector.

Limited opportunities

"But if you in a mining environment where you know that 90% of the positions are technical and require technical skills and people that will be able to manoeuvre underground, to use mobile equipment is not easy for PWDs. It does become difficult, the opportunities become narrow or smaller or less or fewer".

Employer Interview, 2024 (Platinum Mining)

Among the factors that influence attraction of MMS is ***limited opportunities***, according to the respondent. Citing the nature of the mining industry, it means there is a need to have a quota specifically targeting PWDs in the 10% non-technical positions offered. According to Mhlongo & Alexander (2021), limited opportunities for people with disabilities are a significant social and economic challenge that affects individuals with various types of disabilities worldwide. This issue encompasses barriers in education, employment, healthcare, social inclusion, and accessibility. Notwithstanding the above,

Holness, & Rule (2018) felt that addressing these challenges requires a comprehensive and collaborative approach involving government policies, legal frameworks, advocacy, education, and a shift in societal attitudes. Efforts to promote inclusivity, eliminate discrimination, and enhance accessibility can contribute to creating a more equitable society for individuals with disabilities. Additionally, raising awareness about the capabilities and contributions of people with disabilities is crucial in challenging stereotypes and fostering a more inclusive environment.

The provisions of the Constitution of the RSA, Act 108 of 1996 cannot be over emphasised and the responded shared their strong opinion on equal treatment of everyone irrespective of what we perceive they can or cannot do.

"*Acknowledge that we are human first before anything. All human rights that are listed in South Africans Charter applies to a person with disability, they've got right to education, right to a good shelter, right to like being employed. As a country we need to stop stigmatising anybody and get a fair opportunity"*

Employer interview, 2024 (Multiple Organisations)

These statements go to the core of *Ubuntu* and putting equality as a basic human right first will.

Regulations and policies have always served as a guard against discrimination and unconstitutional activities. Developing frameworks to guide, set targets and monitor implementation will help industry technocrats in the transformation process.

Equal opportunities. "*Although unfortunately for the mining sector, I don't think there's a lot of them because they cannot work underground*".

Renumeration.

Opportunities being created specifically for PWDs although they are very few.

Organised Labour, Interview February 2024 (UASA)

- "*Implementation of equity rights.*

-Obligation to train people with disabilities.

-Career growth.

-Good salaries.

-Improvement in technology-automation in the mining sector"

Organised Labour, Interview February 2024 (NUMSA) Training Provider

When a PWDs was requested to respond to questions around issues of the work environment and factors that attracted him to MMS, he iterated the following issues:

"*We need to be treated normal as any other employee; Be considered for positions that require a lot of thinking".*

The respondent acknowledged the support from the employer in terms of housing accommodation, medical aid and utilities. The respondent also commended employer in the gold mining sub-sector for good remuneration packages and medical scheme support.

Being recognised for the work they do

Job posts should be considered to those that are already doing the job, regardless of the physical challenge.

Stop encouraging PWDS to go study for a qualification that they will not be considered for job posts.

Well-schooled PWDs are not in higher positions.

Employee Interview, February 2024. Gold Mining- Protection Services Operation

Legislation and Policy

"Department of Labour gives employers targets

The Company has to meet the targets. "It's the right thing to do as a company to assist the company". "In terms of the support you have to ensure that the area is accommodated to suit them". "If you are going to have a person on a wheelchair, make sure that there is a ramp, and you have to ensure that there is a toilet that accommodates them and also the understanding of colleagues". PWDs. Policies in place that there should no discrimination. Salary increment. Promotion"

Employee Interview, 2024 (Mining)

"We need to be ambassadors for people with blind disability. To stop spending money on township schools printing braille at our expense"

Employer Interview, 2024 (Mining)

A bouquet of customised support mechanisms, costed and budgeted for would provide relief to the MMS and its stakeholders.

Investment in infrastructure that enables PDWs to perform their work optimally. If MMS wants to promote the culture of inclusivity, there needs to be a concerted effort towards creating a conducive work environment.

"Blind people use Application that sends a voice notification whilst typing. Application that voice read E-mails. Having conducive environment having braille documentation. Adequate equipment that will allow them to be effective.

Barriers

"Not to be given effective equipment. Deployed in a company where they are not given computer blind people can only work with computers professionally. Blind people are able to perform soft skills in Administration, Call centre roles etc"

Employer interview, 2024 (Mining)

In the 4th Industrial Revolution (4IR), the MMS needs to consider investing in advanced technologies, Apps and developing their own PDW databases. When organizations maintain databases, it brings their stakeholders closer.

Another responded believed that availability of accommodation is a basic requirement in terms of the *Basic Conditions of Employment Act*, RSA. Therefore, it should be taken to bring comfort to PWDs in the workplace, the same way their counterparts at work do, as stated below:

Suitable accommodation

"*Ability to accommodate them, user friendly offices, workplace and bathrooms and safe workplace environment."*

Employer Interview, 2024 (Mining)

In addition, the responded indicated plans to support PWDs within the organisation.

"*So basically, what we are looking at especially I will say office space or where they don't have to climb stairs, sometimes you have to renovate the offices to accommodate PWDs and it is a costly exercise".* The responded further reiterated on the fact that:

"Providing assurance on safety of PWDs, creating awareness on the opportunities and providing infrastructure conducive to their productivity will bring some relief to all partners."

Employer Interview, 2024 (CLAS)

The issue of suitable accommodation which came up quiet prominently in the document review appears to be another tool that can attract PWDs. This basic need is part of human dignity, and recognition. As one writer said, creating suitable accommodation for people with disabilities involves ensuring that physical environments, facilities, and services are accessible, inclusive, and considerate of diverse needs (McDowell & Fossey, 2019). Some of the key considerations include accessibility standards, universal design, wheelchair accessibility, adaptive technologies, inclusive restrooms, training of staff, emergency evacuation for PWDs, amongst others.

Creating suitable accommodation for people with disabilities is not only a legal and ethical responsibility but also contributes to building inclusive and welcoming environments for everyone.

Another responded stated that, offering competitive salary or remuneration packages is another tool to attract PWDs into the mainstream MMS.

Mobility arrangements and competitive remuneration packages

"Competitive renumeration packages and mobility arrangements such as transport can go a long way in attracting PWDs"

Employer Interview, January 2024 (Mining)

Enhancing mobility for people with disabilities involves providing solutions and accommodations that enable individuals with diverse mobility impairments to navigate and access various environments. This goes without saying that Snoek & Webster (2020) were of the view that remuneration packages for PWDs. In this, creating a truly accessible and inclusive environment requires collaboration between policymakers, businesses, communities, and individuals to address the diverse needs of people with disabilities. These authors further elaborated on the fact that, remuneration packages for people with disabilities should aim to provide fair and equal compensation while considering the unique needs and challenges individuals may face.

A culture of inclusivity was regarded as key by some employers and that equal treatment would ensure that MMS attracts and retains PWDs. One responded emphasised on the positive work areas to attain this.

Positive work environment

The respondent hammered on creating positive and welcoming workspaces and that this can be enhanced by a conducive culture of inclusivity.

"Think positive workspace, positive work area you know and that's important."

Employer Interview, Training Academy Gold Mining

Another respondent, felt that:

"Think positive workspace, positive work area you know and that's important"

Employer Interview, January 2024 Jewellery manufacturing

In relation to the positive work environment (Luu, 2019) stated that creating a positive work environment for people with disabilities is crucial for fostering inclusivity, promoting diversity, and ensuring equal opportunities. Employers can accomplish that through inclusive policies and practices, accessibility, reasonable accommodation, mentoring and support programmes and inclusive communication.

"*User-friendly environments-stairs/office access, bathrooms, canteen, reception, parking, more opportunities for growth, Sense of belonging, embracing environment. Inclusivity as well as Opportunity based factors"*

Interview, January 2024 (IDI) Gold Mining. Sibanye HRTC Transactional Centre

A culture of change

"*A culture change should be driven through ongoing engagement with employees to accept and embrace their colleagues. We need a Framework which understands needs of people with disabilities at work. Over and above that the framework proposed below would help protect the PWDs against ill-treatment when the institution has a clear policy framework and consequence management plan for breach"*

Employer Interview, 2024 Jewellery mining

Culture change within an organisation can have a profound impact on how people with disabilities are perceived, treated, and integrated into the workplace. Fostering an inclusive culture promotes a supportive environment where individuals with disabilities feel valued and are empowered to contribute their unique skills and perspectives (Chordia, 2020)

Journey to MMS: Overcoming Unfamiliarity

Before joining MMS, participants shared diverse experiences in finding suitable jobs. One participant confessed to having minimal knowledge about jewellery, only encountering it in shops. Their interest sparked after seeing a Facebook advertisement for MMS, prompting them to apply. Another participant had a background in beadwork before venturing into the jewellery industry. Attending training at the Diamond Academy played a crucial role in securing a job.

FDG, January 2024 (PWDs)

Opportunities for learning

According to the respondent, opportunities for learning plays a major part in attracting potential employees. One of the employers commented as follows in this regard.

"*There are bursary opportunities if the person wants to go and study and further elsewhere, however, it has never been specifically for PWD, and this is for, so it is not discriminatory". He further elaborated on the following:*

"The positions that we want to retain, or we need to specify, especially in line with the employment equity and attainment of targets for PWDs"

Employer Interview, January 2024 (CLAS)

"In my organisation they are not supported at all"

Employer Interview, January 2024 (Mining)

"My organization is conducive in terms of the environment, and it allows them to grow, they bring their own braille's"

Employer Interview, January 2024 (Mining)

Training Interventions

*Adult Education Program (AEP)**;** MQA support in sourcing PWDs; Policies in place*
There are no skills gap identified; Business Administration Course; No issues when hiring and retaining; Send potentials for training.
" I think in our organisation training effective because we don't just, we don't just train people for the sake of training. We train with an intention to say this person needs it to go to the next level or their job or something like that" Incentive to employers.
MQA should monitor and ask employers why PWDs leave organisations.

Employer interview, January 2024 (Mining)

To realise training interventions that are put in place in the MMS to enable employment of PWDs.

"*Well, we are not recognised because if you have a look at all the adverts that's been placed and learning opportunities there is nothing for us and I'm not looking for any favours, please don't get me wrong".*

Interview, January 2024 (IDI) Gold Mining. Sibanye HRTC Transactional Centre. PWD

-Intercontinental courses on PWDs.
-Inhouse training.
-Further studies.

-More mining courses at local universities.

Organised Labour, Interview February 2024 (UASA)

-Management needs to spend more time with PWDs and better understand individuals' situations.

-There is a need for every mining company leader to receive training about PWDs.

-Theres a need for trainings that will only be for PWDs to position them for their job of interest.

"I can get the tutorials; I'm still goanna be stuck where I am. That's what it feels to be like me".

-Employers do not see the need for PWDs being trained.

-Job post need to specify that it's for PWDs.

-Working for more than 1 positions (some for management), working extra hours but not promoted

Employee Interview, February 2024. Gold Mining- Protection Services Operation

-PWDs specific training programmes.

-Engineering programs.

Organised Labour, Interview February 2024 (NUMSA) Training Provider

Limited opportunities

"*But if you if you work in a in a mining environment where you know what 90% of our positions are technical and require technical and technical skills and people being able to maneuverer underground, you know to use mobile equipment, you know it. It does become difficult way the opportunities become narrow or smaller or less or fewer."*

Employer Interview, 2024 (Platinum Mining)

Opportunities can empower individuals with disabilities to acquire new skills, enhance their knowledge, and increase their employability. This was supported by Luu (2019), who believe that by actively promoting accessible and inclusive learning opportunities, society can contribute to the personal and professional development of individuals with disabilities, ultimately fostering greater inclusion in various aspects of life.

To address the question of attraction and retention as well as the role MQA has in the process, one respondent shared their views as follows:

"*MQA must give us an opportunity to engage how best can work with the training organisations. MQA has to approach organisation with people disability and have workshops particularly in a blind community. Mining companies must invest in public schools by donating machines to print braille. Deploy people with disability in various mining companies. Have database of disable and consider them for employment opportunities. MQA must give disabled people opportunity to show case their skill set. Offer disabled people internships, learnerships at the end of the contract evaluate them using score card to determine if they are suitable for permanent role"*

Employer Interview, 2024 (Mining)

Position based training.

Learnerships

Department of Labour workshops.

Employer Interview, January (2024) Diamond Mining HR Expert (PWD)

4.5 Factors influencing the attraction of employees with disabilities in MMS.

"PWD are people with qualifications, skills and expertise as such they are given a chance to employment like anyone else and that is what we advocate for them be employed.

We deal employment equity with the focus on employee recruitment. However, we do not decide who gets hired as it is the duty of the company, but we oversee that there is fairness.

Companies are reluctant to take in PWD because they are profit driven, as such are quite selective on the type of disability they take in and mining companies do not comply

in taking in PWD because of the work is done underground and its labour intensive which might be a challenge for PWD.

"The roles for PWD are normally in administration jobs such as office clerks, and even being cleaners.

Organised Labour provided recommendations to MMS, which were based on their knowledge coupled with what organisations in MMS do when dealing with PWDs inclusion.

These are as follows:

- *Mining companies must acknowledge that there are PWD who are qualified out there and given the job.*
- *Companies must get closer to organisations working with PWDs such as the Department of Public Service and Administration and NGO they might be able to assist in identifying areas PWD can be more productive. Also, some of these organisations have useful data we can help improving skills of PWD.*
- *PWD must be tried like everyone else, do not do anything to make them seem small or less productive than everyone else. Also give them the same benefits such as bonuses because money motivate people whether they have a disability or not.*
- *The department labour has the Employment Equity Act which regulate the number of PWD within an organisation. The mine premises must be user friendly for them. However, do not overtake care of them that they start feeling like less of an adult.*
- *Mining companies such include PWD in skill retention strategies designed for them not to can use the strategies designed for other employees because it is not considering them.*
- *The role of the organised labour is to enforce the rules put by the government and the compliance of organisation to the workers interests.*
- *PWD must be treated the same as other employees and make it compulsory.*

- *The act itself is good enough, but companies are not complying.*
- *Nothing comes to mind other than Act.*
- *The companies must comply to the Act."*

Interview, February 2024 (Organised Labour)

"Employment equity, Developmental training, Qualification regardless of status and Opportunity based factors"

Employer Interview, January 2024. Diamond Mining (HR Expert)

- "Recruitment agencies, never ask and do you need to disabled person or would you mind having disabled person.
-To mark parking bays".

To retain PWDs in MMS, the following input was made:

- "Need money to make changes, Company needs to provide the logistic and comfortable environment"

Interview, February 2024 IDI, Portland Quarry (HR Expert)

The issue of resource allocation comes up in a number of responses reflecting back to the need for balance, budgets and accommodation.

Conducive environment

Another respondent puts at the core of mechanisms to attract and retain PDWs, which include creating a conducive environment by providing tools, communication aids, and safe workspaces.

"People with disability we mostly have them in more clerical roles" "So what we decided to do is on our side we took people from the community and we put them through Adult Education Program (AEP) targeting People living with disability" Training office without eardrums who has to read manager's lips when talking to him, she has to face him all the time and if there is a need to repeat what was said it is repeated and he does his job well"

Employer Interview, January 2024 Jewellery industry

Seamless Entry into MMS: Minimal Challenges

Upon acceptance into MMS, participants described a straightforward process with clear instructions and minimal challenges. A three-day training period paved the way for employment. The ease of application and acceptance fostered a positive perception of the company. In addition, participants discussed their experiences as employees with disabilities as follows:

Support and Opportunities

"*There are opportunities for growth and development, including the funding options available for starting a personal jewellery business, the conducive environment at MMS, coupled with non-discriminatory policies, contributed to a positive working atmosphere"*

Unique Industry Appeal

"*We were drawn to MMS due to positive feedback from friends and the uniqueness of the jewellery industry. We appreciated the opportunity to stand out by engaging in a field that differs from more conventional professions".*

Focus Group Discussion, 2024 (Jewellery)

An interview with a PWD in the Diamond mining Sub-sector touched on a number of aspects which included difficulties in finding suitable jobs, challenges in the job application process, experiences in the work environment, opportunities for growth and development as well as recommendations for employers. The abstract below gives a multifaceted view from the perspective of PWDs.

Finding a Suitable Job: The participant stumbled upon a job opportunity in the mining and minerals sector (MMS) through an advertisement on Facebook, despite having limited prior knowledge of the jewellery industry. They transitioned from making beads to attending training at the Diamond Academy, which eventually led to securing a job in jewellery.

Challenges in Applying for MMS Jobs: The participant reported no significant challenges in the application process for their current job within the MMS. After being accepted, they received directions on what to do, and a three-day training period preceded their official commencement of work.

Experience as an Employee with Disabilities: The participant highlighted issues such as inferiority complexes among individuals with disabilities, which can hinder their self-

confidence and contribute to stress and performance issues at work. They emphasised the importance of a friendly and accommodating workplace environment, good treatment, and fair salary as factors contributing to employee satisfaction and retention.

Opportunities for Growth and Development: The participant mentioned opportunities for personal growth within the jewellery industry, such as acquiring gemstones and starting one's own jewellery company. They emphasised the uniqueness of the industry and the potential for standing out in a less familiar field.

Employment Equity Targets: While the participant acknowledged challenges for certain disabilities in the jewellery industry, they expressed belief in the potential for individuals with disabilities to work in various roles within the sector. However, they noted the need for accommodation and support, especially for those with communication-related disabilities.

Recommendations for Employers: The participant emphasised the importance of training for employers on how to treat people with disabilities, good communication skills, patience in allowing individuals with disabilities to learn, and the need for supportive and accommodating attitudes among trainers. They also highlighted issues such as inconsistent feedback from supervisors, which can cause confusion and hinder performance.

Focus Group Discussion, February 2024 (Jewellery) PWDs

Overall, the participants provided insights into the experiences, challenges, and recommendations for both individuals with disabilities seeking employment in the MMS and employers aiming to create more inclusive workplaces. They underscored the importance of understanding and addressing the diverse needs and abilities of individuals with disabilities within the mining and minerals sector.

Responding to suitability of PWDs in different sectors and their disabilities, the respondent advised that:

- All the people are appointment in the department if the qualified to the position and if they are able to do the work.
- They qualified for the positions that they are applied
- when we advertise positions even if we are we want to attract a person with a disability or people with disabilities we don't have our criteria and will not

specifically only focus on that, but it will also focus on the whether the person meets the basic requirements for the job.

What opportunities are there in promoting the inclusions of people with disability?

- The response in government there is process to follow in order to promote someone and unfortunately, we it will not specifically discriminate to say that no, this is how we will promote people with disabilities. This is how we'll promote other people's so promotion is promotion if they qualify for promotional for promotion and there's a position that is vacant and they apply for that promotion, they are considered like any other person. We don't have a plan that is specifically saying we are promoting disability people; a promotion is promotion is promotion for all for those who are required to be.
- *"The main thing, you'll find that like for instance there was a, we wanted to appoint a specific percentage in our internship program we went we allocated the percentage to say certain percentage should be from people with living with a disability, but they were not enough who applied. And only 2 were appointed out of 5".*

In responding to how PWDs can be encouraged to join the MMS, the respondent answered as follows:

"*I don't know how this is holding them from applying for positions when we advertise, but there's a disability focal point in the department and unfortunately, it's not within HR. The other thing that may at assist is if we partner with institutions of higher learning and try to get the list from them of those who are finishing and then we sent the adverts directly to them when we advertise for internship programs".*

Stakeholder Interview, February 2024 (Department of Mining Resources and Energy) HR Expert

To address challenges on the retention of PWDs in different occupational categories, the department indicated that they don't have a challenge of retaining them.

In responding to existing programs supporting the promotion of the employment of PWDs that support PWDs within the MQA,

“I don't know about their programs because the only programs that I know are the programs that we have partnering with me e.g. Learnership and Inspector in mine in the department”.

In relation to legislation and its role in supporting inclusion of PWDs, the respondent thinks that South Africa did a lot when it comes to legislation because for the fact that they cannot be excluded in the mainstream of the economy. *“It's very important for me, they cannot be discriminated against and is also for the fact that even the employment equity specifies that a certain percentage of employment should be from people with disabilities, I would say even accommodating them in terms of their needs”.*
Stakeholder Interview, February 2024 (Department of Mining Resources and Energy) HR Expert

4.6 To recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS.

“Effective policies which are not discriminatory
Use of MQA: disability and Reasonable Accommodation Toolkit”
Interview, January 2024 (IDI) Gold Mining. Sibanye HRTC Transactional Centre

“Inclusive legislation on employment and.
Companies should be accommodative to PWDs especially wheelchair users”
Employer Interview, January (2024) Diamond Mining HR Expert (PWD)

“Create more advertisements for PWDs only.

-The employees working under group be also considered for other job posts after they had incidents.

-Make the environment be user friendly for PWDs especially the disability parking”

Employee Interview, February 2024. Gold Mining- Protection Services Operation. PWD

“*Placement in light of experience challenges*
There is need to assist with placing them even though they do not have experience.

"We train them, but they are not employed because they do not have experience". The only request we have is to put those people into the workplace and give them the proper access that they need to get to the workplace"

Employer Interview, January 2024 (Jewellery Mining)

Conducive environment

"*Activities like the games and the sports days and all that is to accommodate them as well that if the person is good at chess, we do have the chess teams on site and then the person can play that chess."*

Employer Interview, January 2024 (CLAS)

"Encourage PWDs in different colleges and universities to consider mining sector.

-PWDs retention at workplaces;

-Workplace plan for PWDs;

-Awareness campaigns and treat them equally as PWDs are same with able bodied peoples.

-Production and supply of PWDs user-friendly equipment;

-More automation in the mining sector;

-Better rehabilitation centres for those injured at work"

Organised Labour, Interview February 2024 (UASA)

"There is a need for organisations to be compliant with the employment equity legislation." Government needs to be firm with this legislation.

-Compliance with equity targets.

-Companies must adhere to code of the Mining Charter.

-PWDs must be well skilled to meet mining qualifications.

Organised Labour, Interview February 2024 (NUMSA) Training Provider

Suitable premises

"*And in terms of the recruitment it, that's one thing that we need to emphasise on that one to make sure that we do have we do accommodate them. Mentioning the accommodation, it will depend at what type of disability of the person that will be appointed then will need to look around our housing and make sure that the person is accommodated before the person even stay in that house and it will be difficult for now to say OK then we reserve these houses because there is limitation of the houses, but should there be a need we need to give preference to the disabled.*

Employer Interview 1, 2024 (CLAS)

Measures to discourage discrimination

The Constitution of the RSA, Act 108 of 1996, Chapter 2 (Bill of Rights) state it clearly that protection of human dignity is of paramount importance.

To put strong measures in place to discourage discrimination.

Employer Interview, 2024 (Platinum Mining)

Discrimination against people with disabilities is a significant social issue that requires proactive measures to promote inclusivity, equal opportunities, and a supportive environment. In addition to that, creating a society that discourages discrimination against people with disabilities requires a comprehensive and collaborative approach. This means, concerted efforts by government, civil society and employers (Luu, 2019).

Assessing Readiness

Regarding the mining charter's employment targets for people with disabilities (PWDs), participants expressed mixed views.

"While acknowledging the challenges, such as the intricate nature of jewellery work, they believe that individuals with certain disabilities, like those who are deaf or use wheelchairs, could still be accommodated".

Suggestions included inclusive and targeted advertising and accommodating work environments.

Personal Growth and Work Flexibility

Participants shared ideas on strategies to enhance the absorption of PWDs in MMS. They discussed opportunities for personal growth, such as obtaining licenses for stones and establishing small workshops. However, they noted a lack of involvement in employment equity and training planning. Financial struggles and communication difficulties were highlighted as follows:

“Challenges faced by PWDs are long-term employment included financial difficulties, personal obstacles like partial blindness, slow learning, and communication challenges. Managers' varying attitudes and potential discrimination also played a role in affecting work performance”.

Training and Patience

Participants suggested that employers undergo training on treating people with disabilities and emphasised the importance of effective communication. Furthermore, they state that:

“The need for patience, understanding that perfection may take time for individuals with disabilities. The attitude of trainers and consistency in feedback were highlighted are factors to be considered in creating an inclusive workplace”.

Another participant in this group responded as follows:

“To build an inclusive work environment in the MMS, the unique journeys of individuals with disabilities joining MMS, the challenges they face, and potential strategies for improvement are important, as the industry strives to meet employment targets for PWDs, fostering a supportive, accessible, and patient work environment emerged is a key factor in promoting long-term employment and personal growth”

Focus Group Discussion, 2024 (Jewellery)

The responsibility of ensuring absorption of PWDs in the MMS lies in all stakeholders within and supporting the industry. Organised labour highlighted their role in the process, reiterating the importance of an inclusive workforce not only to meet equity targets but diversity.

"It remains sitting in employment equity forums and enforce them as trade union and say let's push compliance because steward is there to advocate for employees and future employees".

Mining companies use training programs such as people who cannot speak, they get voice training, and their employees will be grateful to receive such training. management will be hoping to increase input or productivity.

Training is good as it increases the willingness of wanting to come to work as they will be receiving such training which will solve the retention problem. SETAs must employ PWD because they are not complying with the Act, they are not different from any other organisation. They should make it mandatory to have PWD in their training and development class".

Yes, because if they put resources, they can do it.

We are partnering together through the Employment Equity Act; they just need to comply and commit to it. NGOs working with PWD will be strategically placed to advise.

MQA must involve PWD in the employment pool, training should have a portion of disability with the help of NGOs.

Interview, February 2024 (Organised Labour) National Education Chairperson

A number of partners are mentioned and their role put in their clear. This is in concurrence with other respondents who mentioned collaboration. The potential recommendations for future research should mention the of the role that collaboration can plan in bringing in more PWDs into the MMS. Having direct contact and sourcing PWDs from non-governmental organisations is mentioned as a way to improve absorption of PWDs.

Motivations for Hiring PWDs:

"The primary motivation for hiring PWDs is their abilities and skills to perform the required tasks effectively. Additionally, compliance with the Employment Equity Act serves as another motivating factor for the inclusion of PWDs in the workforce".

Employer Interview, February 2024 Diamond Mining (HR Expert) PWD

Opportunities and Support for Inclusion:

The interviewee emphasised that there are ample opportunities for the inclusion of PWDs in the mining industry, with roles ranging from office work to operating machinery from an office setting.

Support measures for inclusion include accommodations such as allowing employees to work from home, providing automatic cars for mobility-impaired individuals, and ensuring accessibility within the workplace through features like accessible buildings and multiple accessible toilets.

Disclosure of Disabilities:

- Employees feel comfortable disclosing their disabilities without being prompted, openly discussing their situations with management.
- The organization treats employees with disabilities as normal, without providing special treatment or preferences.

Accommodations and Challenges:

- The organization believes that all disabilities can be accommodated in the mining industry as long as individuals possess the necessary skills and experience.
- Challenges in hiring PWDs are not explicitly mentioned by the interviewee, suggesting that the organization perceives minimal obstacles in this regard.

Overall, the interview reflects a positive attitude towards the inclusion of PWDs within the organization, emphasising their abilities, providing necessary accommodations, and fostering an inclusive workplace culture.

Employer Interview, February 2024 Diamond Mining (HR Expert) PWD

Cross case analysis

Cross-case analysis is a valuable methodological approach used in qualitative research to compare findings across multiple cases or instances. Cross-case analysis allows researchers to identify patterns, themes, and trends that may emerge across different cases. By comparing multiple cases, researchers can discern commonalities and differences, shedding light on underlying dynamics and processes. This cross-case analysis is provided to assist the sub-sectors in mining find direct strategies that can help

them individually address the barriers to employment and retention of PWDs in the MMS. It is derived from the responses received during FGDs and interviews as well as provide specificity in line with the recommendations which are not sub-sector specific but cut across. While each subsector or participating organisation reads the report, it is important to find exactly recommendations that speak to their individual setting.

The cross-case analysis focuses on the research objectives. It examines cross-cutting issues across sub-sectors how various factors such as the nature of work, accommodations, employer practices, legislation, and policies influence the attraction and retention of PWDs in the Mining and Minerals Sector (MMS) can influence attainment of employment targets for PWDs. The table below is underpinned by proposals from the respondents.

MMS SUBSECTOR	NATURE OF DISABILITY	ATTRACTION & RETENTION	TRAINING INTERVENTIONS	RECOMMENDED STRATEGIES
Gold Mining	○ Predominantly the PWDs in the sector include wheelchair users, blind, deaf, Impaired speech, ○ Reasonable accommodation ○ Improve on training provided and bursaries ○ Reduce expectations from PWDs on speed as abled bodied employees	○ Provision of suitable equipment like braille ○ Currently good salary packages are offered ○ Consider PWDs for higher positions post training ○ Create welcoming environment for PWDs (Culture) ○ Create user friendly environments	○ Training that will push them to the next level in management ○ Meet the obligation to train PDWs ○ Provide more learning opportunities for PWDs	○ Champion collaborative initiatives ○ Provide budget for infrastructure needs to accommodate PWDs ○ Offer PWDs opportunities that require critical thinking beyond clerical duties ○ Recognition for the work they do ○ Improve technology automation in the MMS ○ Clear career growth path ○ Effective and non-discriminatory policies ○ Use of MQA disability and reasonable accommodation toolkit ○ Create more PWD positions ○ User friendly environment

	○ Relax Recruitment processes (psychometric tests)	○ Improve accommodation and accessibility ○ Create a sense of belonging (conducive environment) ○ Inclusivity		
Diamond mining	○	○	Targeted training for PWDs	Provide suitable tools / equipment
CLAS Mining	○ Audit of disabilities around that mining company ○ Equal opportunities ○ Provide relevant training over meeting BEE quota	○ Cost of renovations ○ Classify vacant posts that can accommodate PWDs ○ Provide safe and supportive environment ○ Provide benefits ○ Foster culture change	○ Budget for bursaries ○ Performance management system to ensure relevant training & address skills gaps. ○ Tailored learnership programmes leading to employment ○ Decisive leadership and provision of opportunities ○ Linkages with PWD supporting organisations in HR Planning and targeted adverts	○ Recreational activities, (games and sports days). ○ Suitable accommodation ○ Prioritisation of PWDs for closest housing accommodation ○ Provide opportunities fairly competitive remuneration packages ○ Set aside specific positions for PWDs ○ Conducive environment

		○ Ensure safety ○ Provide suitable accommodation ○ Allocate budgets for accommodation ○ Create awareness on opportunities / Ensure job adverts reach the targeted group		
Diamond processing	Diverse skills within diamond processing sub-sector	Competitive salaries and benefits Supportive environment	○ Focused training for PDWs ○ Post training programmes to encourage PWDs to stay in formal employment	○ Automation ○ Conducive environment

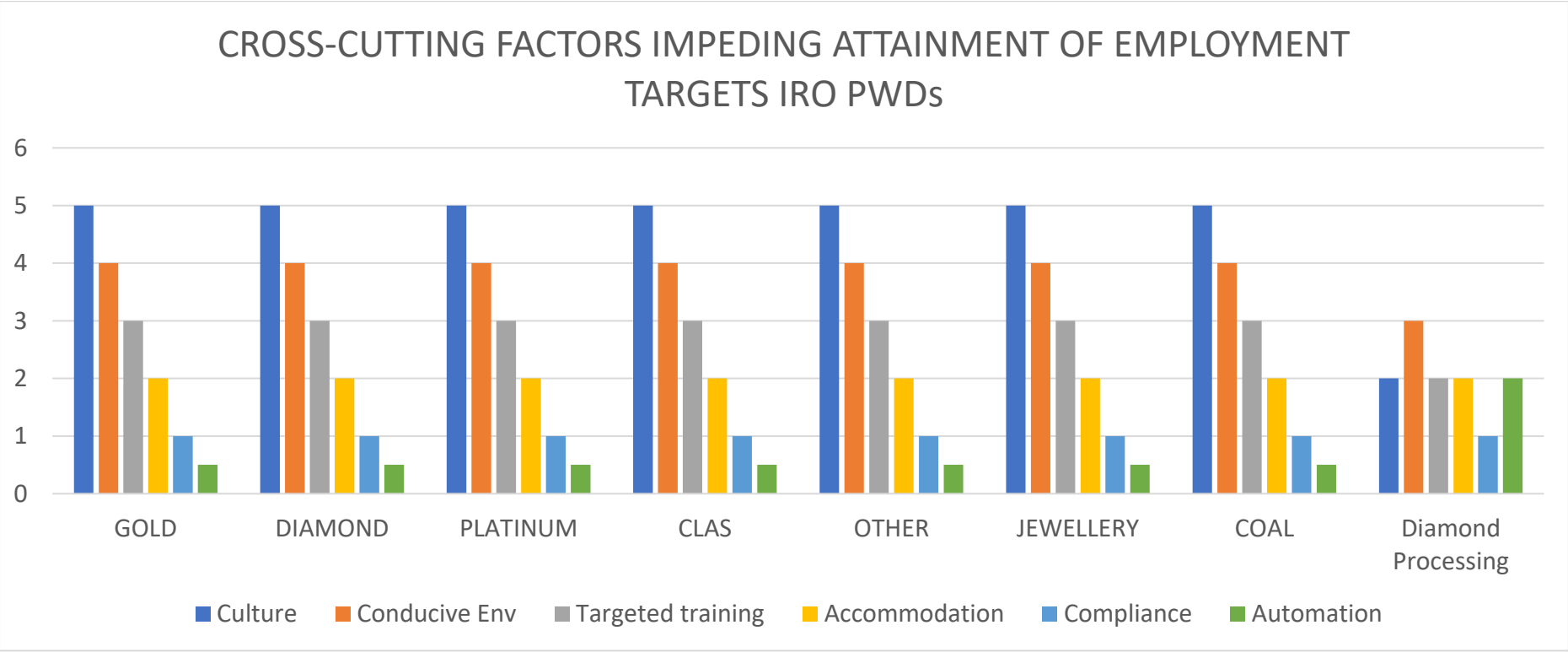
Jewellery mining	○ Outreach programmes	○ Create welcoming and positive workspaces (conducive environment) ○ Organisational culture change ○ Develop a clear policy framework to protect PWDs. ○ Create a conducive environment ○ Provide tools and fair remuneration. ○ Provides supporting tools for those with hearing impairments	○ Continue disseminating adverts for industry training, yielding success stories.	○ Continue making use of social media to advertise positions ○ Improve treatment of PWDs ○ Accommodation and support especially for the speech impaired ○ Diversify roles that can be taken up by PWDs ○ Provide consistent feedback on performance ○ Staff training on treating PWDs ○ Improve accessibility of work premises
Other mining	○ It's easy to secure a job for PWDs in the subsector	○ Flexible work arrangements	○ Targeted training and development	○ Workshops ○ Allocate budget

	○ Accommodation	○ Inclusive organisational culture ○ Involvement of PWDs in Planning ○ Provide comfortable work environment		
Platinum mining	○ Hearing impairments, wheelchairs, sight are the most dominant disability in the subsector	○ Suitable equipment	○ Targeted upskilling of PWDs ○ Accommodation be individual disability cognisant	○ Develop policies to discourage discrimination of PWDs
Coal	○ PWDs spread across ○ Predominantly Hearing impairment, limping are disabilities within the staff complement.	○ Accommodation provided, ○ Supportive subsector ○ Suitable Working tools provided ○ Medical support in terms of medical doctors is provided to PWDs	○ Provide placement opportunities ○ There is budget allocated although placement is a challenge. ○ Create awareness on disability ○ Targeted opportunities for PWDs.	○ MQA needs to open up opportunities for learnerships ○ Allocation of budget ○ MQA considers financial incentives for organisations absorbing PWDs.

		○ Need specific policies targeting PWDs	○ There are internal publications on Disability Awareness. ○ Specific target for each position is given on the advert for positions. ○ In the coal subsector, performance is the key that disability.	○ Accommodation of PWDs with all the necessary tools and technology ○ MQA must develop a database of the different disabilities dominating in the areas where mining operations take place, ○ Put together a schedule of suggest which disabilities can be accommodated in which subsector.
Stakeholders	○ Embracing the unique journey of each PWD and catering to their specific needs	○ Provide suitable accommodation ○ Organised labour must ensure implementation of legislation	○ Provide engineering programmes ○ Mining courses at local universities ○ Improve inhouse training ○ Provide intercontinental courses on PWDs	○ PWDs must feature in skills retention strategies ○ Promotion of PWDs ○ Job specificity for PWDs ○ Mining companies must Invest in schools through CSI to

			○ Leadership training on dealing with PWDs ○ Targeted training for PWDs ○ PWDs specific training programmes	encourage pupils to complete their studies ○ Have a database of PWDs and update timeously ○ Career Expo targeting Special schools and universities ○ Increase automation of the MMS ○ Awareness campaigns on disability for employees ○ Develop workplace skills plan for PWDs ○ Better rehabilitation centres for IODs ○ Compliance to legislation developed to support PWD inclusion ○ Establishment or revival of EE Forums

				○ MQA Training pool must include PWDs, it must be mandatory


CROSS-CUTTING FACTORS IMPEDING ATTAINMENT OF EMPLOYMENT TARGETS IRO PWDs
6
5
4
3
2
1
0
GOLD
DIAMOND
PLATINUM
CLAS
OTHER
JEWELLERY
COAL
Diamond Processing
Culture
Conducive Env
Targeted training
Accommodation
Compliance
Automation

4.5 Summary

In conclusion, reflections by stakeholders indicate the organizational culture, accommodation, training, legislative compliance and conducive environment as critical success factors for an inclusive MMS. The findings provide a mix of challenges and potential solutions in creating a more inclusive employment landscape for people with disabilities in the mining and mineral sector. It is essential for companies in the MMS to adopt a *multifaceted approach*, addressing both physical barriers and cultural aspects to foster a truly inclusive workplace. Collaboration between industry stakeholders, government bodies, and advocacy groups is key in driving positive change in this regard.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

As we embark on the final chapter of this study, it is an opportune moment to reflect on the myriad paths we have traversed in the exploration of factors impeding attainment of equity targets with respect to people with disabilities in the mining and minerals sector. From the inception of our research inquiry to the meticulous analysis of data, each step has contributed to the tapestry of knowledge we have woven. In this concluding chapter, we delve into a comprehensive synthesis of our findings, drawing connections between the threads of evidence and weaving a narrative that encapsulates the essence of our exploration.

Throughout the preceding chapters, we have delved into the inability to achieve equity targets on the employment of PWDs, employing diverse methodologies and analytical frameworks to illuminate the intricacies of challenges faced by PWDs. As we bring this journey to a close, our aim is to distil the wealth of information into a cohesive understanding, shedding light on the answers to our research questions and elucidating their broader implications.

Beyond the academic pursuit, the study seeks to create resonance with real-world operations in each subsector, looking at the SMART (Simple, Measurable, Achievable, Realistic and Time-bound) principles. The practical significance of the findings takes into consideration future research endeavours that this current study wasn't aligned to but can assist in addressing the barriers to attainment of employment targets in respect of PWDs in the MMS. It further contributes to the existing knowledge and serves as a catalyst for future research endeavours.

As we navigate the terrain of the conclusion chapter, we invite the reader to join us in this reflective synthesis, where the fragments of analysis converge to form a comprehensive panorama of insights. Together, let us unravel the tapestry of factors impeding attainment of equity targets with respect to people with disabilities in the mining and minerals sector and discern the implications that *echo* beyond the confines of this study.

5.2 Research overview

In this comprehensive research endeavour, we sought to respond to the primary objective of the study, which was. to investigate the factors impeding attainment of equity targets with respect to people with disabilities in the MMS. The study was guided by the following objectives:

- To understand the nature of the employment profile with respect to the provincial, sub-sectoral, racial, gender, age, and occupational distribution of PWDs.
- Identify the factors influencing the attraction of employees with disabilities in MMS.
- To realise training interventions put in place in the MMS to enable employment of PWDs, and
- To recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS.

The research employed qualitative methods to unravel the intricacies of the factors impeding attainment of equity targets with respect to people with disabilities in the MMS.

Objectives:

Our primary objectives drove a focused investigation into the factors impeding attainment of equity targets with respect to people with disabilities in the MMS. Each objective framed our inquiry, guiding the trajectory of our research.

Methodology:

To achieve a robust understanding of these factors, we utilised in-depth interviews, focus group discussions and documents analysis/ reviews. This methodological approach facilitated a multifaceted analysis, capturing this qualitative dimension of the study.

Findings:

The culmination of our efforts yielded a rich tapestry of findings. Among the prominent discoveries were measures to discourage discrimination, the nature of MMS work, the

nature of disability, the friendly environment, and measures to address specific disabilities, amongst others. This shed light on the factors influencing the attraction of employees with disabilities in the MMS the retention of PWDs and contributed to the broader discourse on barriers impeding the attainment of equity targets with respect to people with disabilities in the MMS.

Contributions to the Field:

This research makes several noteworthy contributions to the field. Key contributions, such as what is stated under 'themes and patterns' are further elaborated on in the following sections. These contributions stand to advance the current state of knowledge in the field of 'barriers that affect the employment of PWDs in the MMS.

Key Themes and Patterns:

Across the diverse phases of the investigation, certain key themes and patterns emerged. These recurring elements include the following and are discussed in detail under section 5.3.:

- Tailored training and employment strategies;
- Creating a conducive environment;
- Overcoming technical challenges;
- Addressing specific disabilities;
- Combating Discrimination and Promoting Inclusivity;
- Ensuring safety and a user-friendly environment; and
- Cultivating Patience and a Supportive Culture

These are discussed in greater detail in subsequent sections.

5.3 Recommendations of the research

In line with the research objectives and to address the main research questions, the study sought to unpack the barriers to the attainment of employment targets with respect to people living with disabilities. In response to the research objectives and document analysis coupled with in-depth interviews, the following recommendations are made:

Recommendation 1: Tailored Training and Employment Strategies

Given the challenges in placing trained individuals into suitable positions, it is recommended to enhance training programs specifically tailored to the needs of people with disabilities (PWDs) in the mining and mineral sector (MMS). Companies should explore innovative approaches, such as creating in-house training departments, to bridge the gap between training and actual employment. This may involve collaborating with educational institutions to design programs that align with the technical requirements of the mining industry. The provision of skills will enhance the confidence that PWD have in themselves, thus encouraging them to seek career advancements. Furthermore, improving the skills of PWD may instil confidence in their colleagues, and thus mitigate stigma and stereotyping that often views PWDs as less productive. In addressing limitations in opportunities, particularly in technically demanding mining environments, companies should explore innovative roles that are more inclusive. The establishment of in-house training departments can be leveraged to tailor training programs to the specific needs of PWDs in various mining sectors. An example is establishing a Training and Development section within the Human Resources department Organogram, with key performance areas specifically on Training and development. Secondly, having a computer laboratory in house for training purposes. Thirdly employing a person that can speak in sign language and provide interpretation, when necessary, while the organisations get its employees skills to improve communication seamlessly with PWDs. This approach aligns with the emphasis on future growth and succession planning, contributing to a more diverse and inclusive workforce. One of the respondents suggested that there are no specific training programmes for PWDs. Therefore, MQA should ensure that there are specific training and learnership programmes that are specifically for PWDS. Furthermore, MQA should ensure that companies in the MMS comply with the mandate of training PWDs and that training reports for PWDs are submitted on a quarterly basis. The following recommendations are based on data collected.

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/timelines*

Limited training programmes specifically for disabled individuals and less monitoring.	Gold mining Jewellery	Provide consistent feedback on training and performance Conduct regular workshops and awareness campaigns Provision of bursaries, learnerships and internships targeting PWDs Include PWDs in the Workplace Skills plan	MQA should ensure that companies in the MMS comply with the mandate of training PWDs and that reports are submitted on a quarterly basis. MQA to provide bursaries, learnerships and internships for PWD within the MMS or provide financial support.	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis

To improve employment absorption, companies should further review and adapt existing bursaries and employment equity programs to better support PWDs. Strategies for future growth and succession planning should align with employment equity goals, ensuring a sustained focus on inclusivity.

Recommendation 2: Creating a Conducive Environment

To enhance the attractiveness of the workplace, companies should invest in creating a conducive environment for PWDs. Activities and sports days can be organized to foster inclusivity, and premises should be evaluated and modified to ensure accessibility for individuals with disabilities. Recognising the financial implications, there should be

initiatives, perhaps in the form of financial support or incentives, to encourage companies to make necessary renovations and accommodations. MQA should partner with institutions that provide grant funding or loans for infrastructure projects such as the Department of Trade and Industry (DTIC) and Development bank of Southern Africa (DBSA) to assist with the provision of funding for companies to enact adequate infrastructure for PWDs. The following recommendations are based on data collected.

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/timelines*
Lack of adequate accommodation for PWDs and the need for upgrading of infrastructure	Gold Jewellery	Infrastructure maintenance and upgrades Budget for infrastructure needs for PWDs Accommodation support for people with speech disability	MQA should enforce budgeting by subsectors/ companies for repairs and maintenance of infrastructure for PWDs	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis.

Recommendation 3: Combating Discrimination and Promoting Inclusivity

To discourage discrimination, companies must implement strong measures in the form of policies, that address discrimination and ill-treatment of PWDs. Encouraging inclusivity requires a comprehensive approach, encompassing physical infrastructure changes and cultural shifts within organisations. Regular diversity and inclusion training programs can be instrumental in creating awareness and fostering a more accepting work environment. MQA should ensure that companies in the MMS provide diversity and inclusion training to their employees. All the employees in a firm should undergo diversity training in the

first 3 months of their employment. Yearly reports should be submitted by each company detailing diversity training received by each employee.

The following recommendations are based on data collected.

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/timelines*
Combating Discrimination and Promoting Inclusivity	Gold CLAS Jewellery Coal	Clear career growth path for PWDs Set aside positions for PWDs Use social media to advertise for positions targeting PWDs Have a database for accommodation of PWDs Run awareness campaigns to staff	MQA should ensure that companies in the MMS conduct diversity training / awareness session on a yearly basis for employees	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis

Recommendation 4: Addressing Specific Disabilities

Tailored interventions and accommodations should be developed for specific disabilities such as deafness and epilepsy. Companies need to actively address transportation issues for PWDs to ensure a holistic approach to their diverse needs. This could involve partnerships with disability advocacy groups and healthcare professionals to create targeted support systems. The following recommendations are based on data collected.

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/ timelines*
Addressing specific disabilities	Gold CLAS Diamond Jewellery Coal	Make assistive devises available for PWDs Provide recreational activities for PWDs Provide closest housing accommodation for PWDs Accommodate speech impaired PWDs Provide necessary, specific tools and equipment Career expos for special schools accommodating PWDs	Provide support for career expos through financial contributions/ grant Conduct research on the specific tool/ technology/ technical devises suitable for PWDs	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis

Recommendation 5: Ensuring Safety and User-Friendly Environments

Companies should prioritise the safety and user-friendliness of the workplace, including offices and bathrooms. Industry-specific training programs, both in-house and on-site, should be developed with accredited service providers, knowledgeable and sensitive to the importance of welcoming organisational cultures, inclusivity and legal compliance by organisations within MMS so as to address the unique requirements of the MMS. This approach contributes to creating a work environment that is not only accessible but also

conducive to the well-being of PWDs. The following recommendations are based on data collected.

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/ timelines*
Ensuring safety and user-friendly environment	Gold Mining Jewellery manufacturing Diamond Processing Coal mining CLAS	Environmental scanning/ assessment for the kind of disability to accommodate. Necessary work tools Technical assistive devises Budget for ensuring conducive workplace. Rehabilitation centres for those injured at work Accessible work environment in relation to specific disabilities Consider speech impairment	Provide training opportunities for companies to understand their role in ensuring reasonable accommodation and in relation to the specific disabilities. MQA should also provide training program to the employer to improve their understanding on how to deal with specific disabilities	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis

Recommendation 6: Cultivating Patience and Supportive Culture

It is recommended to cultivate a culture of patience and understanding within organisations when accommodating PWDs. This involves ongoing communication,

feedback mechanisms, and creating a supportive organisational culture that values diversity and inclusivity. The following recommendations are based on the data collected:

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/ timelines*
Cultivating patience and supportive culture	Gold Mining Jewellery Manufacturing Diamond Mining Platinum Group Metals (PMG)	Recognition of work done by PWD (recognition awards) Non-discriminatory policies (policies to be scanned for compliance) Recreational activities e, g. sports day for PWD Employer support for speech disability (jewellery mining)	Provide training opportunities for companies to develop non-discriminatory policies Provide training support in understanding speech disability, amongst others	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis

Recommendation 7: Collaborative Approach

Finally, a collaborative approach that entails industry stakeholders, government bodies, and advocacy groups is crucial. This collaboration can drive positive change by sharing best practices, advocating for policy changes, and collectively working towards a more inclusive employment landscape for people with disabilities in the MMS. Regular dialogue and partnership initiatives can contribute to sustained progress in this regard. The following recommendations are based on the data collected:

Issue	*Companies implicated*	*Activities*	*Role of MQA*	*Progress monitoring/ timelines*
Collaborative approach	Gold	Champion collaborative initiatives with organisations responsible for PWDs Corporate Social Investment programmes with adopted schools for pupils with special needs directed at PWDs. Ensuring necessary support to those in need. Rehabilitation centres for PWDs within the proximity of the companies Leadership training to improve understanding of PWDs	Provide learnership- targeted at pupils with special needs within the adopted schools Provide leadership development programs that incorporates inclusivity and incorporation of PWDs in the workplaces	Some activities have financial implications, so it is important to provide annual budget and monitor compliance on a quarterly basis

Specific recommendations for the Mining Qualifications Authority on Inclusivity and Support to Persons with Disabilities (PWDs) in the Mining and Minerals Sector (MMS)

At the heart of the mining and minerals sector (MMS), amidst the bustling operations and bustling machinery, there lies a pressing challenge that demands attention - the inclusion and empowerment of Persons with Disabilities (PWDs). As the industry surges forward,

it's imperative to ensure that every member of the workforce, regardless of ability, has equitable opportunities for growth and participation. Recognising this imperative, the Mineral Qualifications Authority (MQA) steps into the arena with a strategic plan aimed at fostering compliance, support, and partnership to propel the industry towards a more inclusive future.

In this narrative of transformation, MQA emerges as a beacon of hope, guiding the MMS towards a future where every voice is heard, every talent nurtured, and every individual valued. Together, with unwavering commitment and collective action, they pave the way for a more inclusive and equitable tomorrow.

OBJECTIVE 1 - To understand the nature of employment profile with respect to provincial, sub-sectoral, racial, gender, age occupational distribution of PWDs.

RECOMMENDATION 1: MQA must ensure mechanisms to address specific disabilities

- Within the existing reporting frameworks, MQA should monitor budget allocations for Career Expos in the subsectors aimed at providing opportunities for Persons with Disabilities (PWDs), within the MMS. To ensure accountability and effectiveness, MQA needs to monitor the number of PWDs attending expos and university intake, tracking job placements for learnerships resulting from these events, annually. MQA should further obtain from the MMS a concept notes highlighting content and career options to be presented at the Expo. MQA should also monitor that Core, support, artisan and the hard-to-fill vacancies form part of the concept note. Occupational Medical Practitioners participate in these Expos to provide answers and clarity to PWDs on site. These Career Expos will provide PWDs with a range of opportunities given their specific disabilities.
- MQA should develop a Calendar or events covering a wide range of disabilities (honouring events like world Braille Day, Blindness awareness month, Deaf Awareness week etc) for all MMS organisations in which they can add their individual activities for the year. These must be submitted to MQA within 30 days of the start of a new financial year.

- It's therefore vital for MQA, employers and their Organisational Medial Practitioners (OMP) to hold each other accountable for implementation or non-implementation of advice or recommendations of OMPs on provision of tools to support PWDs.
- Similarly, the MQA should design a training program targeted at educating employers on effectively addressing specific disabilities encountered in the workplace. An essential component of this program is the evaluation of employers' knowledge and skills both before and after the training sessions to gauge improvements in understanding and competence. The development of comprehensive training materials encompassing various types of disabilities, their implications on employment, and strategies for providing appropriate support and accommodation is crucial. Moreover, the training program should address common challenges faced by employers when working with employees with disabilities, offering practical solutions to overcome them. Given the financial implications of these activities, it is imperative to allocate an annual budget and rigorously monitor compliance on a quarterly basis.

RECOMMENDATION 2: Conduct research on PWD friendly tools and technologies

- Starting from the 2025/26 financial year, the MQA should initiate research endeavours to identify and assess tools, technologies, and devices capable of enhancing accessibility and inclusivity for PWDs in the MMS. This initiative should be guided by clear key performance indicators, including the identification of viable tools/devices and their efficacy in improving PWD participation in mining activities. These Key performance Indicators must be aligned to Codes of good practice, OMP recommendations, Strategic Plans and Scorecards.
- To execute this research effectively, it is recommended to assemble a research team comprising experts in accessibility and technology, Artificial Intelligence and Robotics and to allocate human resources accordingly. Data can be collected through interviews and validated through Delphi on the list of tools necessary to support people with various disabilities in the MMS. As a start information can be obtained from OMPs to inform a need for further research. Emphasis should be placed on practical solutions tailored to the mining industry's unique context and the specific needs of PWDs. Given the financial implications of such activities, it is

Activity:	MQA must provide support to Career Expos targeting Special Schools. This will include monitoring inclusion of the project on CSI initiatives by mining companies.
Frequency:	**Career Expos should be held Annually**

essential to use existing research funds without making new provisions but tilting research focus towards the interest of PWDs inclusion. Compliance should be monitored on a quarterly basis.

- Concurrently, the research project should commence within a year, with interim progress reports provided every six months and a final report with actionable recommendations delivered within a year. This timeline ensures timely progress and maximizes the impact of these initiatives on promoting diversity and inclusion within the MMS.

MQA Related programme
Transformation
Research in the Sector

OBJECTIVE 2 – Factors influencing the attraction and retention of employees with disabilities in the MMS

RECOMMENDATION 3: Creating a conducive environment

Enforce Budgeting for PWD Infrastructure Maintenance:

i. MQA should mandate subsectors/companies within the MMS to allocate specific budgets for repairs and maintenance of infrastructure catering to PWDs.
ii. Ensure that each company allocates a percentage of their budget specifically for PWD infrastructure maintenance, by providing guidelines and support to companies.
iii. Ensure that the allocated budgets are reasonable and feasible within the financial capabilities of the companies.
iv. Mandate the inclusion of PWDs in all skills programs within the MMS and monitor the percentage of PWD participation in skills programs offered by companies.
v. In line with the Guidelines on Minimum Standards of Fitness in the MMS, MQA must ensure that companies have the necessary infrastructure and

accommodations to facilitate PWD participation by assessing the OMP reports and ensure they detail infrastructure needs of each position, post medical examination of an applicant (PWD).

Recommendation 4: Cultivating patience and supportive culture

- The MQA is advised to develop a comprehensive plan aimed at assisting companies in crafting and implementing policies aiming at deterring discrimination. This policy framework should enable employers to customize their policies against discrimination and devise a schedule for its adoption by each employer post public participation. This framework should be flexible enough to accommodate varying needs and circumstances, allowing employers sufficient time to review, customize, and implement the policy effectively. Additionally, workshops and awareness campaigns should be organized to facilitate policy adoption and raise awareness about the importance of inclusivity. The progress of employers in adopting the policy framework should be regularly monitored, and support provided to overcome any barriers to adoption.
- To enhance community education, MQA needs to develop training modules covering the essential elements of these policies while providing resources to support companies in their policy development endeavours. The cost of public participation on the draft policy should be borne by the individual organization.
- A summary of the policy should also find expression in the Code of Conduct signed by each employee on assumption of duty. MQA needs to then monitor that critical elements of the policy are part of the main agreements between employer and employee.
- The monitoring can be done through randomly requesting samples of signed copies of the Code of Conduct and performance agreements. This should be an annual programme to tract improvement and monitoring cases of discrimination reported.
- Additionally, the MQA should monitor by-annually that organisations within MMS conduct trainings internally to enhance their understanding of speech disabilities and how to accommodate employees with such disabilities effectively.

- MQA can then, annually evaluate the employers' knowledge and skills in accommodating speech disabilities and developing materials and workshops specifically addressing speech disabilities, including communication techniques and assistive technologies. It is crucial that this training support is practical and relevant to the workplace context, focusing on actionable strategies for supporting employees with speech disabilities.
- Once the policies have been adopted by each organisation, MQA must be informed within 90 days so that monitoring of policy implementation can commence. Reporting to the Executive Board on the adoption of policies by each employer will ensure accountability and progress tracking.
- To kickstart the initiative, the training rollout plan should be launched within three months, with monthly workshops guiding companies through the policy development process. Furthermore, the policy framework development should be completed within six months, with a timeline set for adoption by all employers within one year. Incorporating training sessions on speech disability understanding
- into the overall training plan within six months, with quarterly sessions conducted thereafter, will provide ongoing support and reinforcement of learning.

MQA Related programme
Develop Learning Programmes
Stakeholder Capacity building

Activity:	MQA should develop a training plan for non-discriminatory policy, facilitate framework development and adoption schedule by all players in the MMS. MQA should lead awareness and provide training support for speech disability understanding
Frequency:	**The framework can be developed in 6 months and adopted within 12 months by all employers in the MMS.**

OBJECTIVE 3 – To realise training interventions that are put in place in the MMS to enable employment of PWDs.

Recommendation 5: Tailored training and employment strategies

Establishment of Clear Guidelines for PWD Training:

- MQA should promptly establish precise guidelines for companies operating within the MMS to train PWDs. This must be linked to numbers (targets). Annual reviews should be conducted to close gaps in the guidelines.
- Provide comprehensive guidance and support to companies for the effective implementation of PWD training programs by setting achievable targets for the number of PWDs to be trained within specified time frames.

2. **Provision of Support Programs for PWDs and helping them overcome technical challenges:**
    - MQA should monitor that a specific number of bursaries, learnerships, and internships are specifically tailored for PWDs within the MMS from the planning to the advertising stage. Portfolio of evidence in the form of copies of adverts reflecting target groups should be shared with MQA for easy monitoring
    - Track and measure the number of PWDs benefiting from these programs to ensure effectiveness.
    - MQA must, bi-annually monitor that capacity development within organisations in the MMS includes sign language among staff to ensure seamless communication that will not leave them feeling less human. Each organisation within the MMS must have a sign language interpreter.
    - Monitor that each organisation has a champion dealing with issues of disability and inclusivity directly linking with MQA. A database of the champions must be maintained by MQA.
    - MQA should consider an audit of tools and technologies as well as their linkage and relevance to the specific disabilities prevalent in a specific organisation.

MQA Related programme
Technical vocational education and training college support Youth and learner development (Bursaries, career guidance & youth development) Career guidance support: Internship and work experience training interventions

Activity:	**Develop and monitor implementation of a framework on specific training targeting PWDs in the MMS. Lead establishment of partnerships between universities, TVET Colleges, other skills development organisations as direct feeders into the MMS.**
Frequency:	**Develop the framework within six months and monitor its implementation annually. Establish partnerships within 4 months and conduct quarterly monitoring of the sittings of the Partners.**

OBJECTIVE 4 – To recommend strategies that can be put in place to improve absorption of PWDs in the labour market within MMS.

RECOMMENDATION 6: Ensure safe and user-friendly environment

Conduct Safety Audit for PWD Accessibility:

- MQA should mandate Mine Health and Safety Council to conduct a safety audit of facilities at mines within the MMS to identify areas requiring intervention for PWD safety.
- Assess the audit report to identify specific areas of concern and recommended interventions.
- Ensure that each organisation in the MMS implements the recommendations within 2025/26 financial year.

- In responding to the Code of good practice for the Mineral Industry: While the core business of MQA is understood, there are interventions that they can make to change the employment status of people with disabilities within the MMS. To

achieve the objectives of the study, MQA needs to lead collaboration and integration by enhancing content of existing planned workshops and knowledge sharing sessions between stakeholders, monitoring participation, and promoting knowledge sharing, with the first collaborative workshop scheduled within six months.

- Fitness to Work Evaluations can be improved by MQA through developing an assessment criteria, conducting audits, and distributing evaluation guidelines within three months.
- There is a need to position and brand the MMS as a caring employer, to be seen taking interest in the well-being and capacity development of its workforce, therefore, information must flow between organisation's OMPs, MHSC, Training departments of organisations. MQA needs to ascertain that even Exit Medical Examinations follow established procedures, with implementation within six months and annual reviews thereafter. These examinations ill help in monitoring the health state of PWDs pre- and post-employment amongst other benefits.
- In terms of Minimum Standards to work in a Mine, MQA can establish health standards, assess compliance through audits, and distribute guidelines within six months. Additionally, MQA can focus on Inclusive Recruitment Practices by auditing medical examinations, creating space in existing reporting mechanisms, and providing guidance within six months, with minimal resources.
- Reasonable Accommodations can be facilitated through a reporting mechanism, tracking accommodation requests, and implementing within three months.
- Risk-Driven Periodic Examinations should be piloted within a year, with a framework developed in the 2024/25 financial year.
- Data Collection and Reporting can be centralized within a year, with regular audits thereafter. MQA should initiate Training and Awareness programs within three months and Continuous Improvement mechanisms within the same timeframe. By implementing these SMART actions, MQA can effectively monitor compliance, promote inclusive employment practices, and ensure the health and safety of workers in the mining and minerals sector.
- The MQA is encouraged to develop specialized training programs tailored specifically for companies, aiming to enhance their understanding of the critical role they play in ensuring reasonable accommodation for employees with disabilities. A key aspect of this initiative involves assessing the participation of

companies in these training sessions and evaluating the level of comprehension and implementation of reasonable accommodation policies post-training. To facilitate effective learning, comprehensive training materials and modules should be developed by MQA working with other regulatory bodies in the MMS, covering various aspects of reasonable accommodation and its practical implementation in the workplace. It is imperative that these training sessions are not only accessible but also engaging and directly relevant to the unique needs of companies operating within the mining industry.

- In compliance with Guidelines on Minimum Standards of Fitness in the MMS and to ensure compliance with inclusive employment practices and promote the health and safety of all workers in the mining and minerals sector, the Mining Qualifications Authority (MQA) can initiate Training and Awareness Programs by developing comprehensive modules on guidelines outlined in relevant sections of the Mine Health and Safety Act (MHSA), conducting training sessions for mining organizations, and providing accessible online resources within six months. Additionally, MQA can focus on Accessibility and Accommodation by establishing guidelines for workplace accessibility, conducting audits, and distributing resources within three months. Data Collection and Analysis can be improved by developing data templates, requiring annual reports from mining organizations, and establishing a central database within three months.
- To ensure timely implementation, the MQA should launch the training program for companies on reasonable accommodation within three months, with subsequent sessions scheduled quarterly thereafter. This approach allows for accommodating new companies and reinforcing learning for existing participants over time. Additionally, the training program for employers dealing with specific disabilities should commence within four months, initially conducting sessions on a monthly basis to reach as many employers as possible. Subsequently, transitioning to quarterly sessions will enable ongoing support and the reinforcement of learning, ensuring sustained progress in promoting inclusivity within the mining industry.

MQA Related programme
Occupational Health & safety

Activity:	**MQA Should facilitate training for companies on reasonable accommodation and handling specific disabilities so respond to the lacking understanding and assumption that accommodating PWDs is expensive.**
Frequency:	**Quarterly sessions must be conducted to build more understanding on resource maximisation, legal implications of the current status if allowed to continue in the subsectors non-compliant.**

RECOMMENDATION 7 - Develop Awards Programme for Compliant Mines:

- MQA should develop a proposal for an awards program to recognize compliant mines within the MMS based on seven key thematic areas identified in the study.
- Define criteria for assessing compliance and award eligibility based on the identified thematic areas.
- Establish clear guidelines and processes for mines to apply for and be assessed for compliance.
- Ensure that the awards program incentivizes and promotes continuous improvement in all aspects of mine operations.
- Create a platform for best practice sharing, especially towards resource maximization and innovation within the MMS.
- MQA should develop the proposal for the awards program within four months, launching it at the Mining Indaba within one year to reduce costs. MQA should issue non-compliance fines for those organisations not utilising their grants within the prescribed time and reallocate them to other activities. In that manner, there will be no need to budget much for the Awards. Also working with MHRC and tapping into resources of the Council to fund the recognition awards.

Dissecting staff composition in the MMS provided an opportunity to delve deep into the opportunities within the MMS that can accommodate PWDs. While there is core mining,

supporting roles, artisans and general labour, as well as hard-to-fill vacancies, the above opens an avenue that can be used to capacitate future Mine Managers from the PWDs in the employ of the mining companies.

The Mining Qualifications Authority (MQA) plays a pivotal role in accommodating disabled individuals in the hard-to-fill vacancies within the mining and minerals sector. A database of the hard-to-fill vacancies read with the OMPs reports and recommendations can assist in capacitating PWDs that are already in management, to take up these positions in future and subject to qualifying. By taking proactive measures and advocating for accommodation of disabled individuals in hard-to-fill vacancies, the MQA can contribute to addressing the skills shortages and workforce challenges facing the mining and minerals sector while promoting diversity, inclusivity, and equal opportunities for all. This therefore places a responsibility on MQA to ensure that this becomes a standing item in strategic engagement with key stakeholders in the MMS so that there is consistent reporting and monitoring of targets.

RECOMMENDATION 8: Enforce compliance With Code of Good Practice

- To ensure the effective implementation of the Employment Equity and Human Resource Development elements of the Code of Good Practice for the Minerals Industry (2009), the Mining Qualifications Authority (MQA) can establish specific measures by clearly outlining requirements and expectations regarding employment equity and human resource development in the sector. This includes defining targets for the participation of persons with disabilities in various occupational levels, as well as specifying priority skills for development in alignment with Sector Skills Plans.
- Secondly, MQA can set measurable targets, such as the percentage of PWDs offered opportunities for functional literacy and numeracy, and skills development expenditure as a percentage of total expenditure.
- Thirdly, achievable actions should be emphasized, ensuring that targets are realistic and attainable within specified timeframes, while providing support and guidance to assist companies in meeting their goals. The implementation framework in the advisory report can assist MQA in developing a three-year plan to deliver the much needed improvement in the MMS in respect of PWDs.
- MQA should set deadlines for the establishment and revision of employment equity and human resource development strategies as outlined in the Code of

Good Practice for the Minerals Industry (2009), while reviewing progress by-annually and providing feedback to ensure compliance.

- Additionally, MQA needs to ensure that developed strategies align with the overarching goals of employment equity and human resource development.
- MQA should annually monitor and evaluate the implementation of employment equity and human resource development elements through the use of human resource scorecards and employment equity scorecards as well as audits, ensuring companies meet their targets and comply with regulations.
- To improve absorption of PWDs into more supporting positions, the Mining Qualifications Authority should seek a database of all core and support positions vacant in the MMS, engage Mine Health and Safety Council for Occupational Medical Practitioner to conduct an assessment of each position in the 2025/26 financial year. This assessment must include tools needed by PWDs that will occupy these support positions. MQA must monitor in statutory reports submitted at predetermined intervals to MQA, to establish budget adjustments to support the targeted group.
- On research and development, to give effect to the Code of practice regulating incapacity / disability in the mining sector, MQA needs to adjust budgets and tilt them towards research projects focused on improving workplace accommodations for employees with disabilities in the mining sector. Fund at least three research projects within the next year. Prioritize research initiatives with practical applications and potential for industry impact.
- Capacity building is essential, with MQA providing training programs and guidance on best practices for recruitment, skills development, and employment equity. Moreover, MQA should enforce compliance by taking appropriate actions against non-compliant companies and collaborating with relevant government agencies.
- Lastly, MQA should emphasize reporting and transparency by requiring regular reporting from measured entities on their progress and publishing annual reports on sector-wide compliance. Through these efforts, MQA can effectively contribute to promoting employment equity and human resource development in the mining and minerals sector in line with the Code of Good Practice in the MMS.

MQA Related programme
Occupational Health & Safety
Occupational Health and Safety skills Programme

Activity:	Conduct safety audit of MMS companies and issue penalties for non-compliance for low representation of PWDs, lack of training and poor provision of infrastructure to accommodate PWDs. Recognise through awards best performing companies within the MMS.
Frequency:	Annual audits must be done and Awards in recognition of compliance, innovation and inclusivity be annual.

Recommendation 9: Combating discrimination and promoting inclusivity

- Through its Compliance and Transformation Unit, the MQA should enforce a directive mandating that companies within the MMS conduct annual diversity training or awareness sessions for their employees on an annual basis. Alongside this requirement, it is essential to monitor participation rates and gather feedback from employees to assess the effectiveness of these training sessions. Furthermore, it's imperative to ensure that the content of these sessions is not only pertinent but also tailored to address the specific diversity challenges encountered within the mining industry.
- Furthermore, the MQA should institute an incentive program aimed at acknowledging and rewarding employers demonstrating the most exemplary diversity strategies and activities.
- Clear and measurable criteria should be established by MQA looking at core features of that could be defined as a diverse and inclusive organisation.
- For evaluating these strategies, MQA should focus on tangible improvements in workforce diversity and inclusion. To support companies in this endeavour, the MQA should offer guidance and assistance in the development of effective diversity strategies.

- This strategy must be revised every three years. It is crucial that these incentives are structured to be meaningful and accessible to companies of diverse sizes and resource capabilities.
- Moreover, the MQA should mandate companies to conduct diversity training sessions annually, with the first session scheduled within six months of the issuance of the mandate, followed by subsequent sessions held on the same date each year.
- In the MQA reporting framework, it is essential for organisations in the MMS to incorporate a reflection on the effectiveness of awareness campaigns initiated. This reflection will provide valuable insights into the impact of these campaigns and guide future strategies.
- To ensure timely implementation, the MQA should expedite the launch of the incentive program within the 2025/26 financial year. The inaugural award ceremony should be scheduled to coincide with an industry event or conference, allowing for wider recognition and celebration of the achievements in diversity and inclusion within the MMS.
- In line with the Code of practice regulating incapacity / disability in the mining sector, and to support companies within MMS, MQA, Chief Inspectorate of Mines and Mine Health and Safety Council, working with relevant stakeholders, MQA needs to develop a monitoring framework to track disability inclusion metrics within the MMS. This should be coupled with data collection on disability representation and workplace accommodations bi-annually.
- Implement data collection protocols and train internal personnel on data reporting procedures. MQA must utilize existing reporting mechanisms and integrate disability-related metrics into regular reporting processes. Data collected and reports done must be published quarterly to track improvement, starting in the 2025/2016 financial year.

MQA Related programme
Stakeholder capacity building

Activity:	**MQA should conduct annual diversity training and awareness campaigns. Lessons learned in each year should be documented as part of monitoring improvement and responsiveness of employers.**
Frequency:	**Yearly**

Recommendation 10: MQA should lead collaborations in the MMS

Leadership in Establishment and Oversight of Partnerships:

- MQA should take a proactive role in establishing and overseeing partnerships aimed at PWD inclusion in the MMS.
- Monitor partnership implementation through meticulous documentation and regular evaluation.
- Develop clear terms of reference for partnerships, ensuring compliance among stakeholders.
- Provide ongoing guidance and support to stakeholders to facilitate effective partnership operations.
- In line with the Code of practice regulating incapacity / disability in the mining sector, and to support companies within MMS, MQA, Chief Inspectorate of Mines and Mine Health and Safety Council need to establish a dedicated support team led by MQA to assist mining companies with implementing medical incapacity management processes. Provide support to at least 50% of registered mining companies within the 2025/26 year.
- MQA needs to offer personalized guidance tailored to each company's specific needs and challenges within the MMS.
- In addition to internal human resource, MQA should establish a cross-sectoral working group comprising mining industry representatives, disability advocacy groups, and government agencies. Host quarterly

meetings to share best practices and discuss collaborative initiatives. Invite key stakeholders to participate and contribute expertise and resources.

- MQA must foster an open and collaborative environment to facilitate meaningful dialogue and partnership opportunities. Conduct stakeholder mapping, develop terms of reference, annual schedule of meetings, standing items for discussion, measures for poor participation of stakeholders in the forum and setting grounds for dismissal from the working group. Convene the inaugural meeting within six months and schedule subsequent meetings regularly. This is in line with the Code of practice regulating incapacity / disability in the mining sector (2016).
- Additionally, it is crucial to monitor the frequency of forums on a quarterly basis, ensuring timely reporting on the graduate output of PWDs. Furthermore, support programs should be initiated within six months, with progress reports submitted biannually to track efficacy and make necessary adjustments. Lastly, partnerships should be established within four months, with regular monitoring and evaluation every quarter.

- For effective collaboration and representation, the Terms of Reference for partnerships should mandate quarterly meetings, with a composition including Universities, TVET Colleges, specific accredited skills development institutions, and relevant government departments, including the Department of Higher Education.
- The MQA is advised to establish a dedicated learnership program tailored specifically for pupils with special needs. This initiative should involve tracking the enrolment of pupils in the program and monitoring their progress in acquiring skills and qualifications.
- Collaboration with schools and relevant stakeholders is essential to design and implement a learnership program that caters to the unique needs of pupils with special needs. It is imperative to ensure that the program provides appropriate support and accommodations to facilitate the participation and success of these pupils.
- In addition, MQA should encourage, and monitor allocation of an annual budget specifically earmarked for capacity development initiatives targeting leadership levels within mining companies. Monitoring the utilization of this budget and assessing the impact of capacity development programs on leadership skills and

effectiveness are crucial aspects. Determining the funding available for leadership capacity development and identifying priority areas for investment will help optimize the utilization of resources. The allocated budget should be sufficient to support a variety of capacity development activities, including training, coaching, and mentorship programs.

- Moreover, MQA should organize annual leadership development programs for industry leaders in the mining sector, with a particular focus on promoting empathy, inclusivity of Persons with Disabilities (PWDs) in the workplace. Evaluating participation rates and gathering feedback from attendees regarding the effectiveness of these programs in fostering inclusivity is essential. Designing and delivering leadership development programs that incorporate modules or sessions specifically addressing the integration and support of PWDs in the workplace is crucial. These programs should be designed to be relevant, engaging, and accessible to industry leaders, thereby fostering a culture of inclusivity and diversity.
- To ensure timely implementation, the learnership program should be launched within six months, with enrolment beginning at the start of the next academic year and progress assessments conducted annually. Likewise, the annual budget for leadership capacity development should be allocated at the beginning of each fiscal year, with funds disbursed according to planned activities and timelines. Furthermore, conducting annual leadership development programs with an inclusivity focus within the first quarter of each calendar year will ensure that industry leaders are equipped with the necessary skills and knowledge to promote inclusivity effectively. Regular updates to program content will ensure alignment with emerging trends and best practices in inclusivity.

MQA Related programme Stakeholder Capacity Development Develop Learning Programmes Learnerships, artisan & Non-artisan development

Activity:	MQA should strengthen Learnership programmes for pupils with special needs, allocate budget for Leadership capacity development. Lead stakeholder mapping, establishment of partnerships with interest groups
Frequency:	Must be reviewed for effectiveness and impact Annually, looking at Terms of Reference as a measurement tool.

5.4 Research contributions

The novelty in the research study started with a multipronged approach, looking at the employer's, contribution in achieving the employment of PWDs targets and industry players in the MMS. Studies done on the inclusion of PWDs have predominantly been emanating from the part of PWDs or government. Industries taking the first step towards an inclusive business environment, its readiness, resourcing and structure has resulted in this report. This is a product that will assist organisations rethink their Organisational culture and drive the necessary change. It equally challenges the MMS to align their broad goals of addressing barriers to attainment of employment targets in respect of PWDs in the MMS to budget provision and tangible plans for the change they seek. In most of the responses received, the issue of budget availability to accommodate PWDs in the MMS came out quiet prominently. This indicates a one-sided approach to solving the problem.

5.4.1 **Practical contributions in line with the recommendations**

Importantly, the findings carry practical implications for the MMS stakeholders and relevant industries. The practical implications cut across all sub-sectors and include amongst others the following:

- **Recommendation 2:** Consideration of diverse abilities, adaptive technologies, reasonable accommodation, inclusive work environments and remote work opportunities, amongst others for PWDs;
- **Recommendation 1**: Employers to tailor-make bursaries and employment opportunities to better support PWDs;
- **Recommendation 7:** Employers are encouraged to ensure a comprehensive and collaborative approach involving influencing government policies, legal frameworks, advocacy, education, and a shift in societal attitudes;
- **Recommendation 3 and 6:** Employers to be pro-active in promoting a culture of inclusivity and ensuring supporting environment;
- **Recommendation 6**: employers to create and promote a culture of inclusivity in support of PWDs;
- **Recommendation 3 and 4:** employers to embark on a comprehensive approach to address the diverse needs of this group; and
- **Recommendation 5:** employers to ensure accessible, safe and user-friendly environment for PWDs.

5.4.2 **Theoretical contributions**

Theoretical contributions refer to original insights, frameworks, or conceptual advancements that contribute to the theoretical understanding of a particular field of study. These contributions are typically derived from research findings, empirical observations, or innovative perspectives, and they aim to extend, refine, or challenge existing theories within a given discipline, Fisher and Aguinis (2017). Theoretical contributions play a crucial role in advancing knowledge, shaping scholarly debates, and providing a foundation for future research.

5.4.2.1 Diversity and Inclusivity Theories:

The practical implications emphasise the consideration of diverse abilities and the creation of inclusive work environments. Theoretical contributions may include the exploration of diversity and inclusivity theories that guide organisations in understanding, valuing, and leveraging diverse abilities, fostering an inclusive culture.

5.4.2.2 Technology Adoption Theories:

Adaptive technologies and remote work opportunities for PWDs are highlighted. Theoretical contributions may involve examining technology adoption theories to understand how organisations can effectively integrate adaptive technologies and leverage remote work solutions to enhance accessibility and inclusivity.

5.4.2.3 Social Exchange Theory:

Employers tailoring bursaries and employment opportunities for PWDs suggests a reciprocal relationship. Theoretical contributions may involve applying social exchange theory to understand how organisations and PWDs engage in mutually beneficial relationships through tailored support programs.

5.4.2.4 Advocacy and Social Change Theories:

The call for a comprehensive and collaborative approach involving government policies, legal frameworks, advocacy, education, and societal attitude shift indicates a need for social change. Theoretical contributions may involve exploring advocacy and social change theories that guide organisations in driving systemic transformations for the inclusion of PWDs.

5.4.2.5 Inclusive Leadership Theories:

Promoting a culture of inclusivity and ensuring a supportive environment requires leadership commitment. Theoretical contributions may involve examining inclusive leadership theories to understand how leaders can foster inclusive cultures, championing support for PWDs within organisations.

5.4.2.6 Collaborative Governance Theories:

The emphasis on collaboration between government, state, civil society, and employers suggests a need for collaborative governance. Theoretical contributions may involve exploring collaborative governance theories that guide organisations in building effective partnerships with various stakeholders to address challenges faced by PWDs.

5.4.2.7 Comprehensive Approaches to Diversity Theories:

The call for a comprehensive approach to address diverse needs implies a holistic strategy. Theoretical contributions may involve examining comprehensive diversity theories that guide organisations in developing multifaceted approaches to accommodate and support the diverse needs of PWDs.

5.4.3 Synthesis of Theoretical Frameworks:

An integrative approach could involve synthesising theories from diverse domains, such as diversity and inclusion, technology adoption, social exchange, advocacy, leadership, collaborative governance, and comprehensive diversity theories. This synthesis can provide a comprehensive theoretical framework guiding organisations in creating inclusive and supportive environments for PWDs. The theoretical contributions can serve as a foundation for future research and practical interventions in the domain of disability inclusion in the workforce.

5.5 Limitations and delimitations of the research

Due to the challenges in obtaining information through interviews, sampling methods had to be alternated due to the importance of the study in the industry. While the population was large, legislation like the Protection of Personal Information Act came as a hinderance to obtaining contact information of the people identified for Focus Group Discussions. Some managers indicated issues of Company Policy and could not provide the researchers with details of the disabled employees to participate in the planned FGDs.

5.6 Recommendations for future research

In view of the findings of the study in across the three (3) methods of data collection, the following recommendations are presented:

- *Comprehensive Employment Profile Analysis*: Conduct a detailed analysis of the employment profile of PWDs in various sub-sectors of the mining and mineral sector, considering provincial, racial, gender, age, and occupational distribution. This can help identify specific areas that require targeted interventions.

- *Impact of Training Programs*: Investigate the effectiveness of training interventions in bridging the gap between theoretical knowledge and practical application. Explore the challenges faced by trained PWDs in securing suitable positions and develop strategies to enhance the alignment of training programs with industry needs.

- *Evaluation of Bursaries and Employment Equity Programs*: Assess the impact and effectiveness of existing bursaries and employment equity programs in promoting the employment of PWDs in the mining and mineral sector. Identify areas for improvement and tailor these initiatives to better support the unique needs of PWDs.

- *Role* of *Innovation in Technical Environments*: Explore innovative approaches for creating inclusive roles in technical environments within the mining sector. Investigate the feasibility of establishing in-house training departments to customize training programs for PWDs, aligning with specific technical requirements of mining sectors.

- *Discrimination Prevention Measures*: Investigate the effectiveness of measures aimed at discouraging discrimination in the workplace. Explore strategies for addressing biases and prejudices, promoting a more inclusive work environment, and improving the overall workplace culture.

- *Financial Incentives for Workplace Accessibility*: Examine the impact of financial incentives or support mechanisms for companies to make their workplaces more accessible. Evaluate the cost considerations for renovations and accommodations and explore potential government or industry-driven initiatives to alleviate these financial burdens.

- *Tailored Interventions for Specific Disabilities*: Conduct research on tailored interventions and accommodations for specific disabilities, such as deafness and epilepsy, within the mining and mineral sector. Identify best practices for addressing the diverse needs of employees with different disabilities.

- *Long-Term Impact of Inclusivity Initiatives*: Investigate the long-term impact of initiatives aimed at creating a more inclusive work environment, including adaptations to facilities and accommodations for PWDs. Assess the organizational culture and its role in sustaining inclusivity over time.

- *Renumeration and Transportation Challenges*: Examine the specific challenges related to remuneration and transportation for PWDs in the mining sector. Develop strategies to address these challenges comprehensively, ensuring that the employment landscape becomes more accessible and supportive for individuals with disabilities.

- *Industry-Specific Training Programs*: Explore the development of industry-specific training programs that cater to the unique requirements of the mining sector. Investigate the feasibility and impact of in-house training with accredited individuals and on-site training initiatives for PWDs.

- *Collaboration for Positive Change*: Assess the effectiveness of collaboration between industry stakeholders, government bodies, and advocacy groups in driving positive change. Explore the potential for partnerships to implement and scale inclusive practices within the mining and mineral sector.

In conclusion, these research recommendations aim to address gaps in knowledge and provide actionable insights to enhance the inclusivity of the mining and mineral sector for people with disabilities. By delving into these areas, researchers can contribute to the development of evidence-based strategies for fostering a more diverse and accommodating workplace.

5.7 Summary

The research study focused on investigating the factors hindering the achievement of equity targets for people with disabilities (PWDs) in the mining and mineral sector (MMS). The objectives were to understand the employment profile of PWDs, identify factors influencing their attraction to MMS jobs, examine training interventions for PWDs, and recommend strategies for improving their employment absorption. Qualitative methods,

including interviews, focus groups, and document analysis, were employed to unravel these factors. Key findings highlighted measures to combat discrimination, create a friendly work environment, and address specific disabilities, among others.

The study's contributions include practical implications such as tailored training and employment strategies, promoting inclusivity, and collaborative efforts involving government and civil society. Theoretical contributions encompass diversity and inclusivity theories, technology adoption theories, and social exchange theory. Limitations included challenges in obtaining information due to legislation and company policies. Future research recommendations include analysing employment profiles, evaluating training programs, assessing discrimination prevention measures, and exploring financial incentives for workplace accessibility.

In conclusion, the study provides valuable insights and recommendations to enhance the inclusivity of the MMS for PWDs, aiming to bridge gaps in knowledge and promote evidence-based strategies for a more diverse and accommodating workplace

REFERENCES

Abbey, S., Charbonneau, M., Tranulis, C., Moss, P., Baici, W., Dabby, L., Gautam, M. and Paré, M. (2011). Stigma and discrimination. *The Canadian Journal of Psychiatry,* 56(10), pp. 1-9.

Alemany, L. and Vermeulen, F. (2023). Disability as a Source of Competitive Advantage. *Harvard Business Review,* 101(7-8), pp. 106-115.

Ali, A., Strydom, A., Hassiotis, A., Williams, R. and King, M. (2008). A Measure of Perceived Stigma in people with intellectual disability. *The British Journal of Psychiatry*, 193(5), pp. 410-415.

Andrade, C. (2018). Internal, External, and Ecological Validity in Research Design, Conduct, and Evaluation. *Indian Journal of Psychological Medicine*, 40, 498 - 499. https://doi.org/10.4103/IJPSYM.IJPSYM_334_18.

Anglo American (2019). Anglo American joins The Valuable 500, reinforcing commitment to inclusion and diversity. Available from https://southafrica.angloamerican.com/media/press-releases/2019/03-12-2019 [Accessed October 2023, Date].

Anglo-American South Africa Transformation Performance Report (2019). *South Africa transformation performance report 2019: re-imagining mining to improve people's lives*. Available on https://southafrica.angloamerican.com/~/media/Files/A/Anglo-American-Group/South-Africa/documents/anglo-american-transformation-report-2019.pdf [Accessed October 2023]

Antonak, R. F. and Livneh, H. (2000). Measurement of attitudes towards persons with disabilities. *Disability and rehabilitation,* 22(5), pp. 211-224.

Babbie, E. and Mouton, J. (2001). *The Practice of Social Research.* South Africa Oxford University Press, Cape Town

Baffoe, M. (2013). Stigma, discrimination & marginalisation: Gateways to oppression of persons with disabilities in Ghana, West Africa. *Journal of Educational and Social Research*, 3(1), pp. 187-198.

Bailey, S., Carnemolla, P., Loosemore, M., Darcy, S. and Sankaran, S. A (2022). Critical Scoping Review of Disability Employment Research in the Construction Industry: Driving Social Innovation through More Inclusive Pathways to Employment Opportunity. *Buildings Journal,* 12, 2196-2230. https://doi.org/10.3390/ buildings12122196.

Banerjee, A. (2008). Why has unemployment risen in the new South Africa? *Economics of Transition,* 16 (4), pp. 715-740.

Bantekas, I., Stein, M.A. and Anastasiou, D. (2018). *The convention on the rights of persons with disabilities: a commentary.* Oxford Commentaries on Interna.

Barnes, C. (2000). A working social model? Disability, work and disability politics in the 21st century. *Critical Social Policy*, 20(4), pp. 441-457.

Barnes, C. (2012). *Understanding the social model of disability.* London: Routledge.

Barnes, C. (2019). *Understanding the social model of disability: Past, present and future.* In Routledge handbook of disability studies (pp. 14-31). Routledge.

Basson Y. (2017). Selected developments in South African Labour Legislation related to Persons with Disabilities. DOI: http://dx.doi.org/10.17159/1727-3781/2017/v20i0a1216.

Beaudry, J.S. (2016), February. Beyond (models of) disability? In The journal of medicine and philosophy: A forum for bioethics and philosophy of medicine. *Journal of Medicine and Philosophy Inc,* Vol. 41, No. 2, pp. 210-228).

Bennett, R., (2022). *The Effects of Disability Status and Employment Level in Shaping Employee Perceptions: A Vignette Study of Employees Who Are Blind* (Doctoral dissertation, San Jose State University).

Benoit, C., Jansson, M., Jansenberger, M. and Phillips, R. (2013). Disability stigmatisation as a barrier to employment equity for legally blind Canadians. *Disability and Society*, 28(7), pp. 970-983.

Bezyak, J., Iwanaga, K., Moser, E. and Chan, F. (2021). Assessing employers' stigmatising attitudes toward people with disabilities: A brief report. *Journal of Vocational Rehabilitation*, 54(2), pp. 185-191.

Blanck, P., Hyseni, F. and Goodman, N. (2023). *Economic inclusion and empowerment of people with disabilities.* In Handbook of Disability: Critical Thought and Social Change in a Globalizing World (pp. 1-22). Singapore: Springer Nature Singapore.

Bonaccio, S., Connelly, C. E., Gellatly, I. R., Jetha, A., and Martin Ginis, K. A. (2019). The Participation of People with Disabilities in the Workplace Across the Employment Cycle: Employer Concerns and Research Evidence. *Journal of Business and Psychology*. doi:10.1007/s10869-018-9602-5

Bonaccio, S., Connelly, C.E., Gellatly, I.R., Jetha, A. and Martin Ginis, K.A. (2020). The participation of people with disabilities in the workplace across the employment cycle: Employer concerns and research evidence. *Journal of Business and Psychology*, 35, pp. 135-158.

Botha, M., Fischer Mogensen, K., Ebrahim, A. and Brand, D. (2023). In search of a landing place for persons with disabilities: A critique of South Africa's skills development programme. *International Journal of Discrimination and the Law,* 23(1-2), pp.163-180.

Breward, K. (2017). Individual, organisational, and institutional predictors of the granting of employer-sponsored disability accommodations. *Canadian Journal of Disability Studies*, 6(4), pp. 56-91.

Brown, R. L, and Batty, E. (2023). *Evolving perspectives on disability, stigma, and discrimination', in Robyn Lewis Brown, Michelle Maroto, and David Pettinicchio (eds)*, The Oxford Handbook of the Sociology of Disability pp. 487–507 https://doi.org/10.1093/oxfordhb/9780190093167.013.28.

Bruyere S.M. (2000). *Disability employment policies and practices in private and federal sector organisations. Ithaca*: Cornell University, School of Industrial and Labor Relations Extension Division, Program on Employment and Disability.

Burzotta, M. and Bertolino, M. (2023). Disability or disabilities: construction of a specific model of stereotypes.

Burzotta, M. and Bertolino, M. (2023). Disability or disabilities: construction of a specific model of stereotypes. [Online] Available from: https://doi.org/10.21203/rs.3.rs-2731502/v1. [Accessed 01 December 2023].

Canton, E., Hedley, D. and Spoor, J.R. (2023). The stereotype content model and disabilities. *The Journal of Social Psychology*, 163(4), pp. 480-500.

Cera, R. (2017). Article 5 [Equality and non-discrimination]. In The United Nations Convention on the Rights of Persons with Disabilities: *A Commentary* (pp. 157-174). Springer International Publishing.

Chan, F., Livneh, H., Pruett, S. R., Wang, C.-C., and Zheng, L. X. (2009). *Societal attitudes toward disability: Concepts, measurements, and interventions.* In F. Chan, E. Da Silva Cardoso, and J. A. Chronister (Eds.), Understanding psychosocial adjustment to chronic illness and disability: A handbook for evidence-based practitioners in rehabilitation (pp. 333–367). Springer Publishing Company.

Charles, W.P., Gie, L. and Musakuro, R.N. (2023). Barriers to the employability of people with disabilities in the South African public service. *African Journal of Disability* 12(3), pp. 1-13.

Chordia, R. (2020). Organizational Inclusion and Turnover Intentions of Federal Employees with Disabilities. *Review of Public Personnel Administration,* 42, 60 - 87. https://doi.org/10.1177/0734371X20942305.

Čolić, M., Dababnah, S. and Milačić-Vidojević, I. (2022). A model of internalized stigma in parents of individuals with disabilities. *International Journal of Developmental Disabilities*, 68(6), pp.924-932.

Daily Maverik, (2020). *B-BBEE and Disability – A Formula for Discrimination and Segregation.* [Online] Available on https://www.dailymaverick.co.za/article/2020-10-20-b-bbee-and-disability-a-formula-for-discrimination-and-segregation/. [Accessed on 01 November 2023]

Darcy, S., Taylor, T. and Green, J. (2016). 'But I can do the job': examining disability employment practice through human rights complaint cases. *Disability and society,* 31(9), pp. 1242-1274.

Daruwalla, P. and Darcy, S. (2005). Personal and societal attitudes to disability. *Annals of Tourism Research,* 32(3), pp. 549-570.

Degener, T. (2014). *A Human Rights Model of Disability,* from: Routledge Handbook of Disability Law and Human Rights

Degener, T. (2016). A human rights model of disability. In Routledge handbook of disability law and human rights (pp. 31-49). Routledge.

Degener, T. (2017). A new human rights model of disability. In The United Nations convention on the rights of persons with disabilities: *A commentary* (pp. 41-59). Springer International Publishing. Morris.

Delia Ferri and Ann Leahy, (2023). The right of people with disabilities to participate in cultural life: is Cinderella going to the ball? Chapters, in: Sally Robinson and Karen R. Fisher (ed.), *Research Handbook on Disability Policy,* 9, 102-117, Edward Elgar Publishing.

Deloitte, (2019). *Mining Charter analysis: Finding a happy medium.* [Online] Available: https://www.deloitte.com/content/dam/assets-zone1/za/en/docs/industries/energy-resources industrials/2023/za_deloitte_mining_charter_May2019.pdf. [Accessed 05 November 2023].

Dempsey, P.G., Kocher, L.M., Nasarwanji, M.F., Pollard, J.P. and Whitson, A.E. (2018). Emerging ergonomics issues and opportunities in mining. *International journal of environmental research and public health,* 15(11), pp. 2449.

Department of Employment and Labour (2022). *23rd Commission for Employment Equity Annual Report* 2022-2023. Pretoria: Government Printers

Department of Education and Training (2019). *National Skills Development Plan. Government Gazette No*. 375 (42290). Pretoria: Government Printers

Department of Mineral Resources (2018). *Broad Based Socio-economic employment charter for the Mining and Minerals industry*. Government Gazette No. 611 (41714) Pretoria: Government Printers

Department of Mineral Resources (2023). *Guidelines for the Compilation of a Mandatory Code of Practice on Minimum Standards of Fitness to Perform Work at a Mine*. Available on www.dmr.gov.za [Accessed on 30 March 2024.]

Department of Minerals and Energy (2009). *Codes of Good Practice for the South African Minerals Industry*. Available on https://www.gov.za/documents/notices/mineral-and-petroleum-resources-development-act-codes-good-practice-minerals [Accessed 30 March 2024]

Department of Mineral Resources. (2016). *Guideline for the compilation of a mandatory code of practice for the management of medical incapacity due to ill-health and injury*. Available on https://www.dmr.gov.za. [Accessed on 02 April 2024]

Department of Education and Training (2006). *The Constitution of the Mining Qualifications Authority.* Government Gazette No. 106 (28457) Pretoria: Government Printers

Department of Women, Youth, Persons with Disabilities (2021). *National Strategic Framework on reasonable accommodation for persons with disabilities.* Government Gazette No. 104 (45328) Pretoria: Government Printers

Dirth, T.P. and Branscombe, N.R. (2017). Disability models affect disability policy support through awareness of structural discrimination. *Journal of Social Issues,* 73(2), pp. 1-11.

DRD Gold Limited (2023). [Online] Available from https://www.drdgold.com/ [Accessed November 2023]

Dunn, D. S. (2015). *The social psychology of disability*. Oxford University Press

Ebrahim, A., Lorenzo, T. and Kathard, H. (2022). Traversing disability: Building social capital through skill development for employment. Disabilities. *Business Journal,* 2(3), pp. 439-450.

Ebrahim, A., Lorenzo, T. and Kathard, H. (2022). Traversing Disability: Employers' Perspectives of Disability Inclusion. Disabilities, *Business Journal,* 2(2), pp. 317-329.

Edmonds, A.T., Sears, J.M., O'Connor, A. and Peckham, T. (2021). The role of nonstandard and precarious jobs in the well-being of disabled workers during workforce reintegration. *American journal of Industrial Medicine,* 64(8), pp. 667–679.

Eneya, D. and Mostert, B.J. (2019). The application of the social model of disability and Wilson's model of information behaviour towards effective service delivery for students with disabilities within an academic library context. *Inkanyiso*, 11(1), pp. 69-79

Ergo Mining Academy (2022). [Online] Available from https://www.ebda.co.za/ [Accessed January 2024]

Fasciglione, M. (2015). Article 27 of the CRPD and the Right of Inclusive Employment of People with Autism. Protecting the Rights of People with Autism in the Fields of Education and Employment: *International, European and National Perspectives,* pp. 145-170.

Ferraina, S. (2012). *Analysis of the legal meaning of Article 27 of the UN CRPD. Key challenges for adapted work settings.* Brussels: BAG: WfbM and UNAPEI, European Association of Service Providers for persons with Disabilities (EASPD).

Ferri, D. (2018). *Reasonable accommodation as a gateway to the equal enjoyment of human rights: From New York to Strasbourg*. Social Inclusion, 6(1), pp. 40-50.

Fisher, G. and Aguinis, H. (2017). Using Theory Elaboration to Make Theoretical Advancements. *Organizational Research Methods,* 20, 438 - 464. https://doi.org/10.1177/1094428116689707.

Fortune, N., Curryer, B., Badland, H., Smith-Merry, J., Devine, A., Stancliffe, R.J., Emerson, E. and Llewellyn, G. (2022). Do Area-Level Environmental Factors Influence Employment for People with Disability? A Scoping Review*. International journal of environmental research and public health*, 19(15), pp. 9082.

Fraser, R.T., Johnson, K., Hebert, J., Ajzen, I., Copeland, J., Brown, P. and Chan, F. (2010). Understanding employers' hiring intentions in relation to qualified workers with disabilities: Preliminary findings. *Journal of occupational rehabilitation,* 20, pp. 420-426.

Gewurtz, R.E., Langan, S. and Shand, D. (2016). Hiring people with disabilities: A scoping review. *Work,* 54(1), pp. 135-148.

Gida, P. and Ortlepp, K. (2007). Employment of People with Disabilities: Implications for Human resource management practices. *Acta Commercii,* 2007; pp. 135-150

Goffman, E. (1963). Stigma: *Notes on the Management of Spoiled Identity, Simon and Schuster*, Inc., New York.

Gravelle, D., Sawyer, J.E., Rualo, G. and Brooks, P. (2023). *A Critical Activist Orientation Predicts Lower Latent Anti-disability Bias.* Authored, DOI: 10.22541/au.168340684.49627977/v1.

Grinker, R.R. (2021). *Nobody's normal: How culture created the stigma of mental illness*. Norton, New York, NY.

Guimarães, B.; Junior, B.B.; Martins, L. (2018). Absenteeism of people with disabilities in the construction industry in Brazil. *Work,* 60 (4), pp. 1-9.

Haegele, J.A. and Hodge, S. (2016). Disability discourse: Overview &critiques of the medical and social models. *Quest,* 68(2), pp. 193-206.

Haihambo, C. (2016). *Disability inclusion in higher education: The case of the Disability Unit of the University of Namibia,* in Lorenzo, T. &Van Rensburg, V. J. (eds), Monitoring disability inclusion and social change, series No. 5, Disability Innovations Africa, Faculty of Health Sciences, University of Cape Town, pp. 1-116.

Hartnett HP, Stuart H, Thurman H, Loy B, Batiste LC. (2011). Employers' perceptions of the benefits of workplace accommodations: reasons to hire, retain and promote people with disabilities. *J Vocat Rehabil,* 34(1), pp. 17–23.

Hiranandani, V. (2005). Towards a critical theory of disability in social work. Critical Social *Work,* 6(1), pp. 1-15.

Holness, W. and Rule, S. (2018). Barriers to advocacy and litigation in the equality courts for persons with disabilities. Potchefstroom *Electronic Law Journal*, 17, 1906-1963. https://doi.org/10.4314/PELJ.V17I5.04.

Hosking, D.L. (2008). *September. Critical disability theory. In A paper presented at the 4th Biennial Disability Studies Conference at Lancaster University*, UK (Vol. 14, No. 5, pp. 736).

Imenda, S. (2014). Is There a conceptual difference between theoretical and conceptual frameworks? *Journal of Social Sciences,* 38(2), pp. 185-195

Impala Platinum Holding Limited (2022). *ESG Report Supplement to the 2022 Annual Integrated Report Creating a Better Future*. Available on https://www.implats-ir.co.za/reports/implats-iar-2022/pdf/ESG-spreads.pdf [Accessed October 2023]

Jammaers, E. and Hardonk, S. C. (2023). Overview of Disability Paradigms in Disability and Management Research". De Gruyter Handbook of Disability and Management, edited by Joy Beatty, Sophie Hennekam &Mukta Kulkarni, Berlin, Boston: *De Gruyter,* 2023, pp. 21-34.

Jansen, J., Derek, M. and Kerryn, J. (2020). *What exactly is research methodology?* Retrieved on October 25, 2023. (Online). Available, https://gradcoach.com/what-is-research-methodology

JCI Mining (PTY) LTD (2022). [Online] Available from https://jcimining.co.za/ [January 2024]

Jenaro, C., Flores, N. And López-Lucas, J. (2018). Using the semantic differential technique to assess stereotypes toward individuals with disabilities: The relevance of warmth and competence. *Universitas Psychologica,* 17(4), pp. 1-18.

Jollie N. Alson, Crizel S. Espela, and Ma Anne Clarisse O. Urbina, (2019). Factors affecting employability of persons with disabilities. *International Journal of Multidisciplinary Research & Publications* (IJMRAP), 1(9), pp. 1-5.

Jon, I. (2021). The city we want: Against the banality of urban planning research. *Planning Theory &Practice,* 1-8. https: doi.org/10.1080/14649357.2021.1893588

Jubilee Metal Group. (2023). [Online] Available from https://jubileemetalsgroup.com/ [Accessed October 2023]

Kahn, S.B. (2017). Equality for People with Disabilities in the South African Public Service. *Administratio Publica,* 25(2), pp. 69-99.

Kamal, I.S.M., Ahmad, I.N. &Ma'arof, M.I.N. (2013). December. Review on accidents related to human factors at construction sites. *Advanced Engineering Forum,*10, pp. 154-159). Trans Tech Publications Ltd.

Kanter, A. (2022). Potential Benefits and Limitations of the New Human Rights Indicators for the Convention on the Rights of People with Disabilities. *AJIL Unbound,* 116, pp. 69-73. doi:10.1017/aju.2022.10.

Kaye, H.S., Jans, L.H. and Jones, E.C. (2011). Why Don't Employers Hire &Retain Workers with Disabilities? *Journal of Occupational Rehabilitation, 21*, pp. 526-536

Kincaid, C. &Smith, N.M. (2021). Diversity and inclusion in mining: An analysis of indicators used in sustainability reporting. *The Extractive Industries and Society*, 8(4), pp.100981.

KPLIME (2018). [Online] Available from https://www.kplime.co.za/ [Accessed November 2023]

Koodibetse, K.G. (2015). HIV/AIDS stigma and discrimination in South Africa: Still a problem. *South African Medical Journal,* 105(9), pp. 703–703.

Korolkova, J. &Anthony, A. (2016). *Prepared for the Disability Human Rights Clinic (2016) The United Nations Convention on the Rights of Persons with Disabilities and the right to support.* The University of Melbourne.

Kumar, R. (2019). *Research methodology: A step by step guide for beginners*. 5th ed. London: Usage

La Grow, S.J. and Daye, P. (2005). Barriers to employment identified by blind and vision-impaired persons in New Zealand. *Social Policy Journal of New Zealand,* 26, pp. 173-185.

Laing, J. (2017). Preventing violence, exploitation and abuse of persons with mental disabilities: Exploring the monitoring implications of Article 16 of the United Nations Convention on the Rights of Persons with Disabilities. *International journal of law and psychiatry,* 53, pp. 27-38.

Lascioli, A. (2016). Prejudice and disability. Educating the looking. Italian Journal of Special *Education for Inclusion, 4*(2), pp. 13-30.

Lengnick-Hall, M. L., Gaunt, P. M. and Kulkarni, M. (2008). Overlooked and underutilised: people with disabilities are an untapped human resource. *Human Resource Management, 47*, pp. 255–273.

Loosemore, M., Alkilani, S., Mathenge, R. (2019). The risks of and barriers to social procurement in construction: A supply chain perspective. *Constr. Manag. Econ*, 38, pp. 552–569.

Luu, T. (2019). The well-being among hospitability employees with disabilities: The role of disability inclusive benevolent leadership. *International Journal of Hospitality Management*. https://doi.org/10.1016/J.IJHM.2019.01.004.

Maja, P. A., Mann, W. M., Sing, D., Steyn, A. J., and Naidoo, P. (2011). Employing people with disabilities in South Africa. *South African Journal of Occupational Therapy,* 41(1), pp. 24–32.

Makuyana, T. (2022). Towards interventions on school dropouts for disabled learners amidst and post-COVID-19 pandemic. *African Journal of Disability*, 11, pp. 1-9.

Markel, K.S. &Barclay, L.A. (2009). Addressing the underemployment of persons with disabilities: Recommendations for expanding organisational social responsibility. Employee *Responsibilities and Rights Journal*, 21, pp. 305-318.

Martz E. (2007). Facilitating inclusive employment: an examination of the accommodations for and the barriers to employment for Russians with disabilities. *Int J Rehabil Res.* 30(4), pp. 321–326.

Marumoagae, M.C., 2012. Disability discrimination and the right of disabled persons to access the labour market. *Potchefstroom Electronic Law Journal,* 15(1), pp. 345-365.

Maxwell, J. (2018). *Qualitative Research Design. An Interactive Approach*. Sage: Thousand Oaks

McDowell, C., and Fossey, E. (2015). Workplace Accommodations for People with Mental Illness: A Scoping Review. *Journal of Occupational Rehabilitation,* 25, pp. 197-206. https://doi.org/10.1007/s10926-014-9512-y.

McKinney, E.L. and Swartz, L. (2021). Employment integration barriers: Experiences of people with disabilities. *The International Journal of Human Resource Management*, 32(10), pp. 2298-2320.

Meekosha, H. and Soldatic, K. (2011). Human Rights and the Global South: the case of disability. *Third World Quarterly,* 32(8), pp. 1383–1398.

Melton, G.B. &Garrison, E.G. (1987). Fear, prejudice, and neglect: Discrimination against mentally disabled persons. *American Psychologist,* 42(11), pp. 1007.

Mehta, V. (2014). Evaluating Public Space. *Journal of Urban Design,* 19, 53-88. https://doi.org/10.1080/13574809.2013.854698

Mhlongo, D. and Alexander, G. (2021). *Sustaining a Democratic Culture through Collaborative Engagements for Citizens with Disabilities: Part 2.* Interpersonal Relationships [Working Title]. https://doi.org/10.5772/INTECHOPEN.96782.

Mining and Qualification Authority (MQA). (2021). *Annual Report 2020/2021*. [Online] Available: https://nationalgovernment.co.za/entity_annual/2836/2021-mining-qualifications-authority-(mqa)-annual-report.pdf. Accessed 19 October 2023]

Mining Council South Africa (MCSA). (2021). *Facts and figures 2020*. (Online) Available: https://www.mineralscouncil.org.za/downloads/send/3-fact-sheets/1761-facts-and-figures-2020. Accessed 20 May 2022]

Mining Qualification Authority (MQA), 2019. *Sector Skills Plan for the Mining and Minerals Sector*: Submitted by the Mining Qualifications Authority (MQA) to the Department of Higher Education and Training 2020-2025.

Mining Qualification Authority (MQA), 2021. *Sector Skills Plan for the Mining and Minerals Sector Update for 2022-2023* Submitted by the Mining Qualifications Authority (MQA) to the Department of Higher Education and Training.

Mining Qualification Authority (MQA), 2020. *Sector Skills Plan for the Mining and Minerals Sector* Submitted by the Mining Qualifications Authority (MQA) to the Department of Higher Education and Training Update 2021-22.

Mining Qualifications Authority. *Career Guide for Mining and Minerals Sector (2021)*. Available on https://mqa.org.za/wp-content/uploads/2021/10/Career-Guide-Final-1.pdf [Accessed on 30 March 2024]

Mining Qualification Authority (MQA). (2018). *Sector Skills Plan for the Mining and Minerals Sector* Submitted by the Mining Qualifications Authority (MQA) to the Department of Higher Education and Training Update 2019-2020.

Mining Qualification Authority (MQA). (2023). *Sector Skills Plan Update 2024/2025 for Mining and Minerals* Sector Submitted by the Mining Qualifications Authority (MQA) to the Department of Higher Education and Training.

Mining Council South Africa (MCSA). (2022b). *Skills development in the South African mining industry.* [Online] Available:https://www.mineralscouncil.org.za/industry-news/publications/fact-sheets/send/3-fact-sheets/1840-skills-development-in-the-south-african-mining-industry. [Accessed 16 September 2022]

Moraka, N.V. and Jansen van Rensburg, M. (2015). Transformation in the South African mining industry-looking beyond the employment equity scorecard. *Journal of the Southern African Institute of Mining and Metallurgy*, 115(8), pp. 669-678.

Morwane, R.E., Dada, S. &Bornman, J. (2021). Barriers to and facilitators of employment of persons with disabilities in low- and middle-income countries: A scoping review. *African Journal of Disability*, 10, 833. https://doi.org/10.4102/ ajod. v10i0.833

Mining Qualifications Authority (2023). STRATEGIC PLAN 2020/21 - 2024 / 25. *Digging with Skills & Knowledge. Department of Resources*. Higher education and training and MCQA. [Online]. Available https://static.pmg.org.za/MQA_Strategic_Plan_-_2020-21_-_2024-25-signed.pdf

Mining Qualifications Authority (2015). *Sector Skills Plan for the Mining and Minerals Sector* Submitted by the Mining Qualifications Authority (MQA) to the Department of Higher Education and Training Update 2015/16. Available on https://mqa.org.za/wp-content/uploads/2021/08/MQA-2015-16-SSP-Update-Final-Submission.pdf [Accessed October 2023]

Msipa, D. and Juma, P. (2023). *The African Disability Protocol: Toward a Social and Human Rights Approach to Disability in the African Human Rights System*. In Handbook of Disability: Critical Thought and Social Change in a Globalizing World (pp. 1-18). Singapore: Springer Nature Singapore

Naberushkina, E.K., Raidugin, D.S., Voevodina, E.V. and Ikhneva, V.E., (2021). *Employment problems of disabled persons: stereotypes and employer missing.* In SHS Web of Conferences (Vol. 125, p. 03003). EDP Sciences.

Naberushkina, E.K., Raidugin, D.S., Voevodina, E.V. and Ikhneva, V.E. (2021). *Employment problems of disabled persons: stereotypes and employer missing*. In SHS Web of Conferences (Vol. 125, pp. 03003). EDP Sciences.

Nario-Redmond, M. R. (2010). Cultural stereotypes of disabled and non-disabled men and women: consensus for global category representations and diagnostic domains. *British Journal of Social Psychology,* 49, pp. 471–488.

Ndebele Mininig (2019). [Online] Available from https://ndebelemining.co.za/ [Accessed November 2023]

Neuman, W.L. (2011) *Social Research Methods: Qualitative and Quantitative Approaches*. 7th Edition, Pearson, Boston

Ngumbela, X.G. (2021). Unique challenges of the poverty dilemma in the eastern Cape Province of South Africa*. African Journal of Public Affairs*, 12(1), pp.114-131.

Nordling, L. (2016). Mining for answers: Tuberculosis research informs class action sought by gold miners. *Nature Medicine,* 22, 330-333. https://doi.org/10.1038/nm0416-330.

Northam Platinum Holdings Limited (2024). [Online] Available from https://www.northam.co.za/ [Accessed October 2023]

Nxumalo, L. (2020). Developing a transformational leadership model to effectively include persons with disabilities in the workplace. *African Journal of Inter/Multidisciplinary Studies*, 2(1), pp. 25-36.

O'Brien, C. (2022). *Article 26–Integration of Persons with Disabilities*. In The EU Charter of Fundamental Rights (pp. 743-778). Nomos Verlagsgesellschaft mbH &Co. KG.

Okigbo, O.N., Saidu, I., Ola-Awo, W.A. and Adamu, A.D. (2023). *Organisational characteristics as a catalyst for effective performance of Nigerian construction organisations*. 13(2), pp. 53-59

Oskouie, F., Kashefi, F., Rafii, F. and Gouya, M.M. (2017). Qualitative study of HIV-related stigma and discrimination: What women say in Iran. *Electron Physician*, 9(7), pp. 4718-4724.

Owens, J. (2015). Exploring the critiques of the social model of disability: the transformative possibility of Arendt's notion of power. *Sociology of health and illness,* 37(3), pp. 385-403.

Pan C., Cao N., Kelifa M.O and Luo S. (2023). Age and cohort trends in disability among Chinese older adults. *Frontier in Public Health* 11, pp. 1-9.

Park, J.Y. and Park, E.Y. (2021). Factors affecting the acquisition and retention of employment among individuals with intellectual disabilities. *International Journal of Developmental Disabilities,* 67(3), pp. 188-201.

Pekuri, A. (2011). Productivity and Performance Management – Managerial Practices in the Construction Industry. *International Journal of Performance Measurement*,1, pp. 39- 58.

Pelleboer-Gunnink, H.A., Van Weeghel, J. and Embregts, P.J. (2021). Public stigmatisation of people with intellectual disabilities: a mixed-method population survey into stereotypes and their relationship with familiarity and discrimination. *Disability and rehabilitation*, 43(4), pp. 489-497.

Pérez-Garín, D., Recio, P., Magallares, A., Molero, F. and García-Ael, C. (2018). Perceived discrimination and emotional reactions in people with different types of disabilities: A qualitative approach. *The Spanish Journal of Psychology,* 21, p.E12. doi: 10.1017/sjp.2018.13.

Petra Diamonds Limited Sustainability Report (2014). *Delivering sustainable growth*. Available from https://www.responsibilityreports.com/HostedData/ResponsibilityReportArchive/p/LSE_FPO_2014.pdf [Accessed in October 2023].

Petra-Diamonds-Limited-Sustainability-Report (2015). *Shaping our future*. Available from https://www.petradiamonds.com/wp-content/uploads/Petra-Diamonds-Limited-Sustainability-Report-2015.pdf [Accessed October 2023].

Pillay, S., Raga, K. &Taylor, D. (2015). Towards an inclusive South African state: the role of equality and human rights in promoting equal opportunities for persons with disabilities in the workplace. *African Journal of Public Affairs,* 8(4), pp. 26-38.

Pneuma Jewellers CC (2019). [Online] Available from https://pneumajewellers.co.za/ [Accessed October 2023]

Portal Quarry (2020). [Online] Available from https://www.portland.co.za/ [December 2023]

Pujianti, P. and Djunaidi, Z. (2022). Evaluation of the Physical Work Environment of Miners in Kutai Kartanegara, East Kalimantan', *The Indonesian Journal of Occupational Safety and Health,* 11, pp. 39-47.

Republic of South Africa, (1995). *Labour Relations Act, 1995*. [Online] Available from: https://www.gov.za/sites/default/files/gcis_document/201409/act66-1995labourrelations.pdf. [Accessed 01 December 2023].

Republic of South Africa. (2016). *White paper on the rights of persons with disabilities: Official publication and gazetting of the white paper on the rights of persons with disabilities*. Department of Social Development. Government gazette, No. 39792.

Republic of South Africa. (2017). *Integrated National Disability Strategy White Paper*. [Online] Available from: https://www.gov.za/sites/default/files/gcis_document/201409/disability2.pdf. [Accessed 02 December 2023].

Retief, M. and Letšosa, R. (2018). Models of disability: A brief overview. *HTS Teologiese Studies/Theological Studies*, 74(1), pp. 1-8.

Richard, S. and Hennekam, S. (2021). Constructing a positive identity as a disabled worker through social comparison: The role of stigma and disability characteristics. *Journal of Vocational Behavior,* 125, pp.103528.

Robinson, T., Sussell, A., Scott, K., and Poplin, G. (2023). Health conditions among male workers in mining and other industries reliant on manual labor occupations: National Health Interview Survey, 2007–2018. *American Journal of Industrial Medicine*, 66(8), pp. 692-704.

Rodriguez, M. (2015). *Rights enabled*: The disability revolution, from the US to Germany and Japan, to the United Nations, pp. 239-241.

Rohmer, O. and Louvet, E. (2012). Implicit measures of the stereotype content associated with disability. *British Journal of Social Psychology,* 51, pp. 732–740.

Sangweni, N. (2015). *Women in Construction: Hindrances that shorten the professional working life of female site engineers on construction sites in South Africa*. Johannesburg: University of Witwatersrand.

Sasikala, V. and Sankaranarayanan, V. (2022). *Diversity in Global Mining: Where We Are and What We Need to Do*. AIB Insights, 22(3). DOI: https://doi.org/10.46697/001c.33781.

Saunders, M., Lewis, P., and Thornhill, A. (2017). *Research Methods for Business Students (Vol. 7*). Essex, UK: Pearson

Savtschenko, V. (2002). *Disabled People on the Labour Market of the International Society*. National Research and Development Centre for Welfare and Health.

Schmidt, M.A. and Smith, D.L. (2007). Individuals with disabilities perceptions on preparedness for the workforce and factors that limit employment. *Work*, 28(1), pp. 13-21.

Schur, L., Han, K., Kim, A., Ameri, M., Blanck, P., and Kruse, D. (2017). Disability at work: A look back and forward. *Journal of Occupational Rehabilitation,* 27(4), 482–497.

Schur, L., Kruse, D. and Blanck, P. (2005). Corporate culture and the employment of persons with disabilities. *Behavioral sciences and the law,* 23(1), pp. 3-20.

Schwab, S.J. and Willborn, S.L. (2002). Reasonable Accommodation of Workplace Disabilities. *William & Mary Law Review,* 44, pp. 1197.

Seatzu, F. (2017). Article 9 [accessibility]. *In The United Nations Convention on the Rights of Persons with Disabilities*: A Commentary (pp. 225-242). Springer International Publishing.

Setume, S. D. (2016). Myths and Beliefs About Disabilities: Implications for Educators and Counselors. *Journal of Disability and Religion*, 20(1-2), pp. 62–76.

Shakespeare, T. (2006). The social model of disability. *The disability studies reader,* 2, pp. 197-204.

Silverman, D. (2019). *Interpreting qualitative data*. 6th Edition. London: SAGE

Smart, J.F. (2009). The power of models of disability. *Journal of Rehabilitation*, 75(2), pp. 3-11.

Smit, D.M. and Tessendorf, E. (2021). Patriarchy and unpaid work as barriers to top-level female appointments: Are South Africa's labour laws enough not to keep a good woman down? *Journal for Juridical Science*, 46(1), pp.111-144.

South African Human Rights Commission, 2017. *Disability toolkit*: A quick reference guide and monitoring framework for employers. [Online] Available:

Statistics South Africa (Stats SA). (2021*). General household survey*. [Online], Available: https://www.statssa.gov.za/?page_id=16405. (Accessed 20 September 2023)

South Africa. (2011). *The National skills development strategy III (2011-2016*). Pretoria: Government Printers

Statistics South Africa (Stats SA). (2022). *Gross domestic product quarter 2: 2022*. (Online), Available: https://www.statssa.gov.za/publications/P0441/P04412ndQuarter2022 .pdf. [Accessed 16 September 2023]

South Africa (2020) *Economic Recovery and Reconstruction Plan*, Pretoria: Government Printers, (Online), Available: https://www.gov.za/sites/default/files/gcis_documents/Economic%20Recovery%20Plan%20Publication_highlights.pdf

Staniland, L., Hasking, P., Boyes, M. &Lewis, S. (2021). Stigma and non-suicidal self-injury: Application of a conceptual framework. *Stigma and Health*, *6*(3), pp. 312-323.

Stone, D.L. and Colella, A. (1996). A model of factors affecting the treatment of disabled individuals in organisations. *Academy of Management Review,* 21, pp. 352-401.

Sundar, V. and Brucker, D.L. (2018) Personal and organizational determinants of job satisfaction for workers with disabilities. *Rehabilitation Counseling Bulletin*, 1-10. https://dx.doi.org/10.1177/0034355218770272.

Terzi, L. (2004). The social model of disability: A philosophical critique. *Journal of applied philosophy,* 21(2), pp. 141-157.

The Constitution of the Republic of South Africa (Act No 108 of 1996)

Tracy, S. J. (2020). *Qualitative research methods*: *Collecting evidence, crafting analysis, communicating impac*t (2nd ed.). John Wiley and Sons.

Trans Hex Group (2021). [Online] Available from https://transhex.co.za/ [Accessed October 2023]

Travis, M.A. (2002). Perceived disabilities, social cognition, and innocent mistakes. Vanderbilt *Law Review*, 55, pp. 481-580

Van Brakel, W.H., Sihombing, B., Djarir, H., Beise, K., Kusumawardhani, L., Yulihane, R., Kurniasari, I., Kasim, M., Kesumaningsih, K.I. and Wilder-Smith, A. (2012). Disability in people affected by leprosy: the role of impairment, activity, social participation, stigma and discrimination. *Global health action,* 5(1), pp. 1-12.

Van Niekerk, Z. And Van der Merwe, J. (2013). Participation opportunities for persons with disabilities in training interventions in the DTI CIPRO. *SA Journal of Human Resource Management,* 11(1), pp. 1-12.

Vornholt, K., Villotti, P., Muschalla, B., Bauer, J., Colella, A., Zijlstra, F., Van Ruitenbeek, G., Uitdewilligen, S. and Corbière, M. (2018). Disability and employment–overview and highlights. *European Journal of work and Organisational Psychology*, 27(1), pp. 40-55.

Waddington, L. and Priestley, M. (2021). A human rights approach to disability assessment. *Journal of International and Comparative Social Policy,* 37(1), pp. 1-15.

Wang S., Phillips, D. and Lee, J. (2021). Disability prevalence in midlife (aged 55–65 years): Cross-Country comparisons of gender differences and time trends. *Womens Midlife Health*, 7(1), pp. 1-10.

Watson, A.C. and Larson, J.E. (2006). Personal responses to disability stigma: From self-stigma to empowerment. *Rehabilitation Education,* 20(4), pp. 235-246.

Wordsworth, R (2003). *Hiring people for their abilities and not their disabilities: a qualitative study aimed at identifying the barriers faced by organisations in Gauteng when employing people with disabilities in the business and financial sectors of the economy*. University of Pretoria.

Yellow Media (PTY) LTD (2024). [Online] Available from https://yellowmedia.co.za/ [Accessed December 2023]

Ximba, T. M. (2016). *Career advancement challenges facing people with disabilities in South Africa*. [Online] Available from: https://uir.unisa.ac.za/handle/10500/22159. [Accessed 29 November 2023].

Yang, L. (2022). Deconstructing social exclusions: The practice of digital activities among disabled people in China. *Media and Culture Journal,* 234, 45-49