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2025-03
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Govender, Rajesan. (2025). An examination of the impact of leadership style on DRA Global’ s talent retention and employee development in remote copper mining projects in the Democratic Republic of the Congo (DRC). [Master's dissertation, University of the Witwatersrand, Johannesburg]. WIReDSpace. https://hdl.handle.net/10539/50107

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An examination of the impact of leadership style on DRA Global's talent retention and employee development in remote copper mining projects in the Democratic Republic of the Congo (DRC)

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A Research Project proposal submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Science in Engineering.

March 2025

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ABSTRACT

The increased demand for copper has resulted in a global uptake in copper mining projects. Subsequently, mining project houses must prioritise talent retention strategies to ensure competitive advantage and sustainable delivery of projects in this environment. In this study, DRA Global's workforce was investigated to assess the influence of leadership styles on talent retention in remote copper mining projects in the Democratic Republic of Congo (DRC).

The research followed a descriptive, quantitative approach and data was collected via Likert scale questionnaires distributed to project professionals in the research environment. The perceived importance and actual experience of leadership styles were assessed, along with the actual experience of their leader's talent retention behaviours.

The transformational leadership style was found to positively correlate with talent retention while laissez-faire and management-by-exception leadership behaviours were found to correlate with high attrition rates.

Recommendations are made to further enhance leadership effectiveness by tailoring bespoke leadership programmes to address the unique challenges of remote mining projects. These leadership development initiatives offer opportunities to improve workforce stability in remote, copper mining projects in the DRC.

ACKNOWLEDGEMENTS

I would like to express sincere appreciation and gratitude to the following people:

- Dr. Lorraine Doherty – for supervision of my research, and her consistent support and guidance from the onset. Your encouragement and positive nature have contributed to academic and personal fulfilment in completion of this research
- Senior management at DRA Global – for affording me the opportunity to conduct the research study within the company, and the significant support that I received to complete the research.
- Participant and respondents – for taking your valuable time to conduct the research survey, which contributes to building a workplace culture that drives DRA Global to new heights.

DEDICATION

This research study is dedicated to my maṉaivi, Thenesha Govender, for your unwavering support, patience and motivation during our journey.

It is also dedicated to our families, who have laid foundations for our education and our character.

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CHAPTER 1

1. INTRODUCTION

In 2021, Goldman Sachs boldly reported that 'copper is the new oil', as it strongly positioned copper as a critical commodity for addressing the climate change (Goldman Sachs 2021: p.1). S&P Global also reported the "metal of electrification" will be a key ingredient to achieving international economic and climate goals (S&P Global 2022: p.9). As the global need for copper mining projects increase, the demand for professionals who have experience in copper mining projects will also increase. Talent retention is a critical concern for organisations who operate in the remote, copper mining project environment, and these organisations must strive to retain talent to maintain their competitive edge.

In the mining industry, organisations place significant expectations on their leaders to influence employees towards organisational goals and values (Bezuidenhout & Schultz, 2013). According to Bezuidenhout & Schultz (2013), mining organisations can be considered progressive if their leaders positively influence employees towards the organisation's desired workplace culture and values. A leadership style that positively influences employees will drive engagement and long-term commitment hence the role of leaders becomes imperative in the talent retention goal.

However, the leadership styles and behaviours required to achieve talent retention goals may differ in different working environments. Therefore, in the context of remote copper mining projects, it is prudent for organisations to focus on this specific working environment to further investigate the leadership styles and behaviours that positively influence talent retention goals.

1.1 Research Background

DRA Global (DRA) is a global engineering, procurement, construction management (EPCM), project delivery and operations management group, with significant focus on the mining, minerals and metals industry (DRA Global, 2024). DRA has a strong reputation for having experienced engineering professionals who provide deep expertise in delivering mining projects in remote and challenging locations, specifically in base metals such as copper, cobalt and nickel (DRA Global, 2024).

DRA's employees are recognised as their greatest asset and cornerstone of the business, therefore ongoing talent development and knowledge transfer is essential to the sustainability of their business (DRA Global, 2024). These talented professionals deliver fit-for-purpose engineering solutions for executing mining projects in remote locations and these projects commence with scoping and pre-feasibility, and transition to execution and final handover (DRA Global, 2023).

DRA's leadership approach combines existing tactics within the mining industry alongside modern management techniques. According to Bezuidenhout & Schultz (2013), the existing leadership approach within the mining industry is largely driven by attainment of organisational goals and values. Mining leaders tend to motivate employees with incentive-based rewards, thus driving organisational objectives with compensation and financial rewards. At DRA Global, the leadership approach attempts to merge existing mining leadership strategies with a people-based approach, thus making a conscious effort to create a positive workplace culture (DRA Global, 2024). As noted by Bezuidenhout & Schultz (2013), leaders can progress a mining organisation if they are successful in implementing a constructive work culture and people-based leadership approach.

DRA's project management model is 'tailored to deliver the unique requirements' of each project and client, and their team of experienced professionals adds value across the project lifecycle by delivering challenging projects within 'stringent time, cost, quality, risk and safety constraints' (DRA Global, 2024).

Historically, DRA has been significantly involved in engineering and project delivery activities within the thriving copper mining industry in Central Africa. The Central African Copper Belt is the only region on the African continent with a significant copper reserve base, as shown in Figure 1 (S&P Global, 2022). The Central African Copper Belt (CACB) is a region that extends across the south-eastern region of Democratic Republic of Congo (DRC) and the north-western Copperbelt province of Zambia. This region represents the largest mineralised sediment-hosted copper region in the world (Geology for Investors, 2016). Consequently, this region provides a credible pipeline of future copper mining projects that can benefit mining EPCM groups such as DRA.

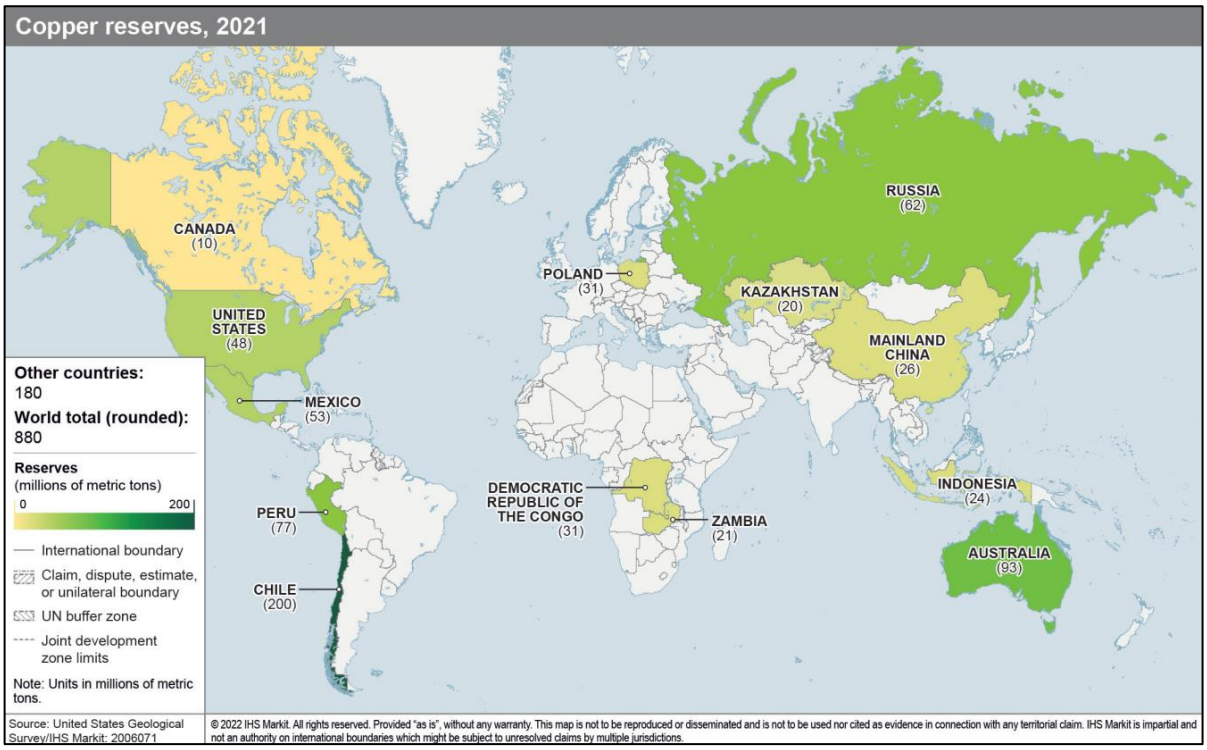


Figure 1: 2021 USGS Estimate for Copper Reserve Base

Source: S&P Global – The Future of Copper, 2022 Report

DRA has a successful track record of establishing remote copper mining operations in the CACB. Some of these key projects include the Kipoi Copper project, the Kinsenda Copper Project and the Konkola Copper project (DRA Global, 2024). These projects are categorised as remote mining projects due to inadequate, or lack-of, infrastructure surrounding the operational base, as well as poor regional economics (Smuts, 2016). The remoteness of these operations results in challenges such as long-lead supply chain, long-distance travel for employees, as well as special working rosters that involve on-site rotations and heavy workloads (Nel & Kotze, 2017). Labour commuting to the operation can take up to a day via air travel and long-distance bus-in services, whereas logistics travel can take weeks for large trucks to transport goods from cross-border industrial hubs (Smuts, 2016).

In recent years, DRA has been working with one of the largest growing copper mining companies in the CACB region, Ivanhoe mines' Kamoa-Kakula project (DRA Global, 2024). International mining consultant, Wood Mackenzie, has independently ranked the Kamoa-Kakula copper project as the largest undeveloped high-grade copper discovery in the world (Amos, Nkuna, & Matsetela, 2018). DRA's involvement with the Kamoa-Kakula project has been since inception in 2019, and Ivanhoe mines chose to continue using DRA's professional services for further works in the copper complex (Ivanhoe Mines, 2023). This ongoing relationship with the Kamoa-Kakula Copper Project is testament to the successful delivery of the remote mining project thus far, and DRA will look to sustain this relationship for a mutually beneficial pipeline of work in the region.

The above-mentioned projects in the CACB region, specifically in the DRC, demonstrates the types of projects that DRA execute within this geography and EPCM-type contracting solutions are the most common in the region. DRA must take every opportunity to ensure they are well positioned to deliver future pipeline of projects in the remote copper mining industry in the DRC. To achieve this, DRA must empower their workforce to take the business forward in this vital commodity and mining region. Human resource factors such as talent retention and employee development are key ingredients in sustainable delivery of projects, as this ensures consistency and succession planning for executing existing works and winning new projects in the region.

1.2 Problem Statement/Motivation

Remote, copper mining projects require advanced technical, commercial and project management skills to ensure success in achieving project deliverables. It is essential that project management teams use every avenue to develop and retain talent since the latter have gained experience and lessons in this remote project environment. In retaining talent, it also assists management teams to avoid losing their key assets due to the personal stresses of working in remote project environment.

According to DRA's project data, approximately 52 skilled employees have moved on from a recent copper mining project in the DRC, contributing to a total of 30% of the skilled workforce in this region over the last 5 years. It is evident there is significant talent turnover for projects in this context.

Numerous factors may contribute to talent turnover. Work Institute's 2024 Retention Report shows that health and family, work/life balance, and management are three of the top five reasons for staff turnover in 2023, all of which have been on a upward trend since 2020 (Work Institute, 2024). Hadebe et al (2023), Waldick et al (2023), Shikweni (2018) and van Hoek (2016) align with these reasons for high turnover rates, all relevant to the mining and construction industries in Africa.

Leadership styles and factors play a vital role in influencing health and family, work/life balance, and overall management. However, leadership style has traditionally been left to the discretion of the relevant project management teams. Different approaches to leadership may lead to varying levels of success in talent retention and development, especially in remote, copper mining projects. Furthermore, changes in leadership style between different members of the same team may result in colleagues being frustrated due to a lack of consistency.

These inconsistent, inappropriate leadership styles and behaviours may impact talent retention and development within the project and the business.

In an environment where talent retention and development are crucial to sustainable delivery of projects, this research is motivated to understand if there is a relationship between leadership styles

and, talent retention and employee development, specifically related to remote, copper mining projects in the DRC.

1.3 Research Question

The Critical Research Question (CRQ) for this research project is:

- How does leadership style contribute to DRA Global's talent retention and talent development, for sustainable delivery of remote, copper mining projects in the Democratic Republic of Congo?

1.4 Research Objectives

The critical objective of this research is to identify which leadership styles actively contribute to talent retention and development in remote, copper mining projects. To this end, the following objectives are set for this research study:

- Evaluate the influence of leadership styles on talent retention
- Analyse the impact of leadership styles on employee development.
- Assess the optimal leadership style for progressing talent retention and development goals in remote, copper mining projects in the DRC

1.5 Summary of Research Methods

The research followed a descriptive, quantitative approach as data was collected using Likert scale questionnaires that were electronically distributed to the project's target population.

The target population included DRA Global's employees with experience working within remote, copper mining projects in the DRC. The questionnaire comprised of four sections which were compiled to collect participant data relating to demographics, importance of leadership styles, personal experience of leadership styles and personal experience of talent management factors. Participant responses were reflective of their views of leadership styles (importance and personal experience) and talent retention (personal experience) whilst working on remote, copper mining projects in DRC.

The collected questionnaire results were analysed using descriptive methods on Microsoft Excel. Analysis of results were performed for demographics, thus allowing for descriptive statistics to be visually interpreted in each category. Furthermore, with the use of Microsoft Excel Analysis Toolpak Add-ins, correlation and statistical significance analyses were performed to address the research objectives. Internal consistency of results was measured using reliability and validity tools such as

Cronbach's Alpha computation and internal validity practices. This ensured that reliable and valid statistics were used in the discussion of results, and the subsequent conclusions and recommendations for this research paper.

CHAPTER 2

2. LITERATURE REVIEW

A literature review provides a systematic summary of historic research relating to the subject matter being studied (Neethling, 2023). Creswell & Creswell (2018) posit a literature review as a benchmarking process for assessing the results of one study to other related findings, whilst filling in gaps or extending the literature in the topic.

This literature review assesses academic literature pertaining to:

- Leadership theories and styles,
- Talent management, with focus on employee development & talent retention,
- Leadership factors influencing talent management.

Lastly, the literature review was summarised by developing a literary conceptual framework for the influence of leadership styles on talent retention. This conceptual framework, based on academic literature, was used in the assessment of the research results relative to similar literature in the field of leadership and talent retention.

2.1 An overview of Leadership Theories

Leadership research and literature dates back thousands of years and can be simply defined as the capability to influence people to act and behave in a certain way, thus driving the delivery of organisational goals (Mey, Poisat, & Stindt, 2021).

Turner & Muller (2005) provide a well-documented history of leadership literature dating back from 500 BC, when Confucius described the beliefs of effective leaders. Turner & Muller (2005) went on to discuss the 20th century theories of leadership, which includes six leadership theories referenced by Dulewicz & Higgs (2003), Handy (1982) and Partington (2003). These theories, or schools of leadership include trait school, behavioural school, contingency school, vision school, emotional intelligence school and the competency school (Turner & Muller, 2005). Literature relating to these schools of leadership are assessed to develop a foundational knowledge of leadership theories prior to analysing its impact on talent retention and development factors.

2.1.1 Trait leadership theory

Gehring (2007), in his qualitative research of trait leadership theories applied to project management, summarised that certain personality traits can support effective project leadership. This aligns with ancient trait theory which positions leaders as individuals who have innate abilities that distinguish themselves from others (Gehring, 2007). Leaders' traits were seen as generic and transferred 'through bloodlines', therefore trait theory advocates that leaders are born with leadership characteristics that allow them to influence or control their followers (Gehring 2007: p.45). This great man theory, similar to the nomothetic approach, presented leaders as destined to rule due to their innate characteristics or traits (Oyewola, 2024). The nomothetic leadership approach aligns with trait theory as subordinates or followers are influenced by bureaucracy, organisational needs and authority thus eliminating individual preferences (Ozuruoke, Ordu, & Abdulkarim, 2011)

2.1.2 Behavioural leadership theory

Behavioural leadership theory advocates that suitable leadership behaviours or styles can be adopted by effective leaders, thus proposing that leaders 'can be made' (Turner & Muller 2005: p.50). This approach allows individuals to be considered more than the organisation (Ozuruoke, Ordu, & Abdulkarim, 2011). A leader utilising the behavioural leadership style aligns with the idiographic approach, where their unique individual experiences allow for leadership behaviours to be acquired (Oyewola, 2024).

2.1.3 Contingency leadership theory

Contingency theory has similar principles to behavioural theory, as it places emphasis on evaluation of the situation before matching the leadership characteristics required to deliver effective results (Turner & Muller, 2005). Initially theorised by Fred E. Fiedler in 1964, the contingency theory of leadership is foundationally based on the environmental situation thus allowing for the selection of the appropriate leadership action or behaviour (Suharyanto & Lestari, 2020).

For the contingency leadership theory in project management practices, distinct leadership styles have been associated with this environment, and Turner (1999) posit four styles that display suitable behaviours of an effective leader. These four styles include:

- Laissez-faire leadership style – a leadership style that is defined by non-involvement or non-interventional behaviour of the leader (Yang, 2015).
- Democratic leadership style – leadership style that is characterised by the leaders' effort to involve team members in the decision-making processes (Bhatti, Maitlo, Shaikh, Hashmi, & Shaikh, 2011).

- Autocratic leadership style – leadership style where a leader takes decisions autonomously, exercising individual control and directing the actions of the team (Jaafar, Zambi, & Fathil, 2021).
- Bureaucratic leadership style – a leadership style focused primarily on policies and procedures, with limited focus on people within the team (Al Khajeh, 2018).

According to research by Frame (1987), contingency leadership theory can be applied to the different stages of project management, where the four behavioural leadership styles can be associated with each stage. Turner & Muller (2005) tabulated the appropriate behavioural styles against the four project life cycles, and this is quoted in Table 1, below.

Table 1: Leadership Styles and the Project Life Cycle (Turner & Muller, 2005; p51)

Leadership Style	Project Stage
Laissez-faire	Feasibility stage
Democratic	Design stage
Autocratic	Execution stage
Bureaucratic	Close-out stage

2.2 A review of Leadership Styles

Leadership styles have been categorized by multiple researchers who have advanced theories beyond the initial trait, behavioural and contingency leadership models. Two notable theories associated with leadership styles is the Full-range Leadership Theory (FRLT) by Avolio and Bass (1991), as well as the Goleman (2002) Emotional Intelligence leadership theory.

2.2.1 Full-range leadership theory (FRLT)

Avolio and Bass first purported the FRLT in 1991 and it is one of the most widely accepted leadership models amongst leadership academics (Antonakis, Avolio, & Sivasubramaniam, 2003). It represents typologies of leadership behaviour divided into three styles which include:

- Transformational leadership style – a leadership style that advocates inclusive employee engagement, thus inspiring team members to drive towards the ‘good of the group’ and achieving superior leadership performance (Bass 1990: p21).
- Transactional leadership style – a style that is defined by leadership behaviours which offer promises or rewards, consequently encouraging employee fulfilment (Bass, 1990).
- Laissez-faire leadership style – similarly described to Yang (2015), where leaders demonstrate non-involvement or non-interventional behaviour, but includes elements of non-leadership behaviours by omission (Bass, 1990).

Antonakis et al (2003) noted these three leadership styles are further characterised into nine leadership factors or behaviours that allow for each leadership style to be assessed. These nine leadership behaviours are shown in Table 2, below.

Table 2: Full Range Leadership Theory – Leadership styles and corresponding nine leadership behaviours/factors (Saxe, 2011)

Leadership Style	Leadership Behaviour/Factor
Transformational leadership style	Idealised Influence (Behaviour)
	Idealised Influence (Attributed)
	Inspirational Motivational
	Intellectual Stimulation
	Individual Consideration
Transactional leadership style	Contingent Reward
	Management-by-exception (Active)
	Management-by-exception (Passive)
Laissez-faire leadership style	Laissez-faire

As shown in Table 2, above, the FRLT asserts the transformational leadership style to comprise of five leadership behaviours with two dimensions associated with the idealised influence factor (attributed and behavioural). According to Mathew (2013), attributed idealised influence is associated with leaders' ability to hold the trust, faith and respect of their subordinates, whilst appealing to their ambitions and being a role-model to them. Behavioural idealised influence is associated with living the ideals that individuals believe and value, along with placing importance on morals, ethics and purpose (Wadensten, 2012).

Inspirational motivation indicates the leaders' ability to show vision to their subordinates, whilst intellectual stimulation measures the ability to foster creative thinking, values and a tolerable environment during difficult situations (Mathew, 2013).

The last of the five transformational leadership factors, individualized consideration, measures the leaders' interest in others, including aspects of the professional ambitions as well as their personal well-being (Saxe, 2011).

For the transactional leadership factors, FRLT states three associated behaviours being contingent reward and two dimensions of the management-by-exception behaviour (active and passive).

Contingent reward is related to the leaders' display of expectation and reward management as well as recognition of their subordinates' accomplishments (Mathew, 2013)

The active management-by-exception factor measures the degree to which leaders communicate the requirements of the job when there are deviations or failures, however, show content with

minimum performance to meet the required standards (Govender, 2018). Passive management-by-exception is a leaders' behavioural trait that triggers corrective action or intervention after individual's mistakes have created severe consequences (Wadensten, 2012).

Lastly, FRLT declares the laissez-faire leadership style to be associated with a single leadership behavioural factor by measuring whether leaders are content with minimum effort from subordinates and allowing them to perform as they believe they need to (Mathew, 2013).

According to Bass (1990), transactional and transformational leadership are common visionary behavioural styles that are present in progressive leaders.

2.2.2 Emotional Intelligence leadership theory

In the modern era, the visionary and emotional intelligence schools have been a focus area across numerous research efforts.

Goleman et al (2002) refers to six leadership styles that align to the emotional intelligence leadership school, all of which are interchangeable as each situation requires. These six styles include (Goleman, Boyatzis, & McKee, 2002):

- visionary leadership style – associated with motivation by setting a vision (Hengy, Farooqui, Dimitrion, Forouhi, & Daveluy, 2022),
- coaching leadership style – associated with employee development for the future (Hengy, Farooqui, Dimitrion, Forouhi, & Daveluy, 2022),
- affiliative leadership style – associated with establishing emotional relationships and a harmonious environment (Hengy, Farooqui, Dimitrion, Forouhi, & Daveluy, 2022),
- democratic leadership style – associated with achieving team consensus in decision-making (Hengy, Farooqui, Dimitrion, Forouhi, & Daveluy, 2022),
- pace-setting leadership style – associated with driving standards, performance and excellence (Hengy, Farooqui, Dimitrion, Forouhi, & Daveluy, 2022),
- commanding leadership style – associated with authoritative behaviours to achieve compliance (Hengy, Farooqui, Dimitrion, Forouhi, & Daveluy, 2022).

These six styles are associated with the emotional intelligence of the leader and can be more effective than the intellectual capability of the leader (Turner & Muller, 2005). A combination of these styles is used by effective leaders though the first four styles are associated with building team resonance whilst pace-setting and commanding styles are shown to foster conflict in teams (Goleman, Boyatzis, & McKee, 2002). Hence, it is important that leaders use the pace-setting and commanding style with discipline as these leadership styles can create dissonance (Goleman, Boyatzis, & McKee, 2002).

The review of the existing leadership literature has provided a strong foundation for understanding leadership theories. The contemporary studies of Confucius in 500 BC and more recent theories associated with trait, behavioural and contingency have formed a comprehensive body of knowledge in leadership research. However, the Avolio and Bass (1991) Full-range Leadership Theory (FRLT) has given leadership research significant impetus and remains the most widely used leadership theory by academics in the modern era.

A foundational knowledge of leadership theory has been documented and the literature review progresses into an assessment of talent management academic research to establish a knowledge base relating to employee retention and employee development.

2.3 An overview of Talent Management

Gallardo-Gallardo et al (2013) describe the traditional meaning of the term "talent" as the above-average abilities or personal characteristics of individuals, focusing on talent as an object. This innate ability can be evident in a particulat field or range of functions, thus allowing one to display "talent" (Tansley, 2011). In modern human resource management literature, "talent" has been defined more commonly by the subjective approach, where the meaning refers to talented individuals or persons within the workplace (Gallardo-Gallardo, Dries, & Gonzalez-Cruz, 2013).

Two common subjective talent strategies are the inclusive talent approach, refering to all employees as organisational talent, and the exclusive talent approach, where an elite segmentation of the workforce is made to categorise some employees as "talent" (Gallardo-Gallardo, Dries, & Gonzalez-Cruz, 2013). McCracken et al (2016) summarise the object and subject approaches to talent management in Table 3, below, whilst including the inclusive and exclusive elements.

Table 3: Summary of Gallardo-Gallardo et al (2013) talent management approaches (McCracken, Currie, & Harrison, 2016)

	Inclusive Approach	*Exclusive Approach*
Object Approach	Focused on developing a broad group of people with developmental activities that unlock their potential. Aligned with individual human resource development and an idiographic approach.	Focused on specially-chosen individuals who are given opportunites to maximize their potential due to their ability or commitment. Aligned with a nomothetic approach, with specific development opportunites for individuals with 'innate talent'.
Subject Approach	Broad talent management practices across a large group of people within the organisation. Aligned with human	Focused on individuals who have shown high potential or performance, thus establishing themselves as future talent for key roles.

	resource management across a company or business	Aligned with succession planning or management in training programmes.

For either method, a clear framework for managing these talented individuals is required hence talent management can be broadly described as the strategies that a company executes to recruit, develop and retain employees over time, whilst maintaining employee happiness and productivity (McKinsey & Company, 2023).

Talent development and retention, along with talent attraction, are viewed as the foremost practices within this framework of talent management (Thunnissen, Boselie, & Fruytier, 2013). Employee development and talent retention are critically reviewed in the following subsections.

2.4 A review of Employee Development literature

Employee or talent development can be defined as the 'planning, selection and implementation of development strategies' to enable an organisation to meet their future strategic objectives (Garavan, Carbery, & Rock, 2012; p6). Training and development is associated with any process that drives employee performance, thus enabling them to improve their skills, knowledge, attitude, and behaviour (Ochurub, Jeremiah, & Iipumbu, 2022).

2.4.1 Theories and practices in Employee Development

According to Rezaei & Beyerlein (2017), career development, organisational development and individual training and learning are considered key components of talent development. This holistic approach, along with traditional work-related training interventions, creates a comprehensive, inclusive system that is personalised and socially constructed for and by individual employees (Rezaei & Beyerlein, 2018). According to Ochurub et al (2022), training and development improves employees' working skills as well as individual and organisational superiority. Career development must be viewed as a collabration between employees and employers since the career development success can only be achieved with organisational assistance and individual investment in the process (Nkomo, Thwala, Aigbavboa, & Ohis, 2020).

According to Herbert (2016), high achievers or talented employees value career experience and growth, especially if it accompanies contributing towards company goals. Companies can gain competitive advantages by positioning top performers at the "right place and right time", as this allows them to gain the necessary exposure whilst still adding value to the business (Herbert, 2016).

Authentic talent development is also a concept that can be considered as an opportunity for organisations to grow talent . Debebe (2017) describes authentic talent development as a process where an individual discovers and cultivates their individual talents, thus learning to develop and

grow towards their potential. This leads to organisational strategic benefits associated with improved performance, optimisation and succession planning as high potential talent have a high likelihood of taking on senior, high-profile roles within the organisation (Debebe, 2023).

2.4.2 Employee Development across age demographics

According to Marais et al (2017), in research focused on retaining talent within Generational Y engineers, organisations should place career engagement in focus whilst also emphasizing hygiene factors and engagement on tasks and work-setup (Debebe, 2017). Similarly, Luscombe et al (2013) also concluded that Generational Y employees value bespoke training and development, with emphasis on well-targetted programmes that progress these employee's career goals. This generational cohort, which represents the largest ever to enter the working environment, place high importance on being given opportunities to collaborate and be actively involved in organisation decision making (Luscombe, Lewis, & Biggs, 2013). Along with work enjoyment and the opportunity to utilise their skills and training, Luscombe et al (2013) find that these elements play a vital role in retaining talent within Generation Y employees.

Millenial talent also thrives on bespoke training and development programmes, as well as career development, which supports talent retention (Hoek, 2016). Career planning is proposed as a key point of engagement, which aids in development and retention whilst encouraging 'independence and self-reliance in pursuing a career' (Marais, Barnard, & Mensele, 2017: p88).
Garavan et al (2012) posit that traditional training and development processes have been successful in uplifting technical competencies, and this allows talented employees to enhance their system and process abilities to meet the required standards of performance. However, over recent decades, generic competencies such as teamwork, communication and knowledge management have come into focus, as soft skills have proven to be increasingly important in the modern workplace (Garavan, Carbery, & Rock, 2012).

The review of employee development literature demonstrates that it is an essential part of driving organisational performance and strategic goals. From an employee perspective, individuals place significance on personal development, and this extends across demographics and industries. Younger employees, within the generational Y and millennial categories, have heightened expectations relating to training and development, with emphasis on bespoke programmes for their individual growth.

In the context of this research, the employee development literature indicates that this is a key factor in progressing talent retention as well as attainment of project goals, especially in the technically demanding environment of remote, copper mining projects.

2.5 A review of Talent Retention literature

Talent retention is aligned with the organisation's ability to retain or keep their skilled employees (Mey, Poisat, & Stindt, 2021). It is a process that organisations implement to ensure their most talented employees or workers are retained and do not leave the organisation (El Sayed, Wadie, & El Koussy, 2021). Managers and employers use employee retention processes as a driving force for 'keeping employees within the organisation for a longer period of time', and organisation's must present their plans clearly so they convince employees about their retention efforts (Chauke 2021: p18).

2.5.1 Theories on talent retention strategies

Organisations must have a strategy in place to retain those who are identified as talented employees, and clear plans must be implemented to manage, train and develop these personnel thus creating an environment that outlines the organisation's interest and appreciation for talent retention (El Sayed, Wadie, & El Koussy, 2021). Letchmiah and Thomas (2017) posit that organisation-specific retention strategies or factors must be identified in each company since similar retention schemes may bring differing levels of success at different organisations. Equally, blanket retention policies may not be successful and advantageous throughout the organisation at different employee levels, hence retention efforts must be segmented to target specific areas of the business (Letchmiah & Thomas, 2017). According to Chauke (2021), the employee retention strategy is an ongoing process that must never end while periodically implementing new ideas and plans to revitilise the strategy. An adequate employee retention strategy requires time and attention to maintain and keep skilled workers in the organisation (Chauke, 2021).

For mining companies, identification and retention of talent must be done, and that talent must be empowered with the necessary training and development to lead the firm into the future (Dickie & Dwyer, 2011). Furthermore, according to Dickie & Dwyer (2011), the relationship between leadership and performance must be recognised, consequently, leadership talent must be allowed to lead through tough times whilst being retained and developed.

A successful talent retention strategy results in low employee turnover, which reduces rotation in the labour market due to employees desire to transfer away from their existing organisation, job position, occupation or state of employment (Wakabi, 2016). According to Neethling (2023), employee turnover can be simply described as the number of employees who resign or leave their organisation, or their position in the organisation, within a given or predetermined time period. Regular monitoring and measurement of employee turnover statistics is essential for organisations to make informed decisions regarding employee retention strategies (Neethling, 2023). A lack of

employee retention strategies can lead to uncontrolled employee attrition which directly threatens the attainment of organisational goals (Eteng, et al., 2025).

2.5.2 Common factors that affect talent retention and employee turnover

Firth et al (2002) affirms there are numerous reasons why employees intend to leave their job however some of the most common reasons include job stress, lack of organisational commitment and job dissatisfaction. Management has some control over these factors, therefore elements such as work overload, relationship between supervisors and subordinates, and job ambiguity are some of the stressors that must be monitored (Firth, Mellor, Moore, & Loquet, 2004). Wakabi (2016) indicates that job stressors can vary in different working environments, however management and leadership style can be among the main stresses for employees since the management is a direct reflection of the organisation. Once these job stressors are identified, via employee exit interviews or otherwise, specific corrective strategics must be in place to reduce employee turnover intentions (Amushila & Bussin, 2021).

Hausknecht et al (2009) studied twelve factors in their research of retention reasons across difference dimensions, job levels and performance in the leisure and hospitality industry. Table 1, below, quotes the names and definitions of these retention factors, all of which were adapted from the work of Price and Muller (1981) and Steers (1977). Numerous factors can influence retention of employees in different industries and levels of work however job satisfaction, extrinsic rewards, constituent attachments, organisational commitment, and organisational prestige were found to be the most frequently mentioned reasons for retention amongst the 24,829 employees who formed part of this research (Hausknecht, Rodda, & Howard, 2009).

Table 4: Description and definition of retention factors (Hausknecht, Rodda, & Howard, 2009:p271)

Retention Factor	**Definition**
Advancement opportunities	The amount of potential for movement to higher levels within the organisation
Constituent attachments	The degree of attachment to individuals associated with the organisation, such as supervisor, coworker, or customers
Extrinsic rewards	The amount of pay, benefits, or equivalents distributed in return for services
Flexible work arrangements	The nature of the work schedule or hours.
Investments	Perceptions about the length of service to the organisation.
Job satisfaction	The degree to which individuals like their jobs.
Lack of alternatives	Beliefs about the unavailability of jobs outside the organisation.
Location	The proximity of the workplace relative to one's home.

Nonwork influences	The existence of responsibilities and commitments outside the organisation
Organisational commitment	The degree to which individuals identify with and are involved in the organisation
Organisational justice	Perceptions about the fairness of reward allocations, policies, and procedures and interpersonal treatment.
Organisational prestige	The degree to which the organisation is perceived to be reputable and well regarded

Similarly, according to El Sayed et al (2021), the employee retention process is related to the following elements, which encourage employees to remain within the organisation:

- providing weight and investment into employee experiences and career development;
- motivating talent within the organisation,
- developing organisational loyalty, and
- rewarding talent, in financial and non-financial terms.

The retention factors associated with employee development, job satisfaction and motivation, as well as employee rewards are found to be the common themes for employee retention research.

Employee development has been researched and described in the previous subsection, therefore the remaining themes are reviewed as follows:

- Employee job satisfaction and motivation – its impact on talent retention
- Employee rewards – its impact on talent retention.

2.5.3 A review of Job Satisfaction and Talent Motivation – impact on talent retention

According to Locke (1976), job satisfaction can be defined as the positive emotions or pleasurable state that one experiences from receiving appraisal of his or her job. Robbins (1993) defined talent or employee motivation as the willingness to express significant effort towards achieving the goals of the organisation, influenced by the employee's own individual or personal needs (Robbins, 1993). When assessing Robbin's definition, Ramlall (2004) posit these individual needs are an internal personal state that drives employees to generate an attractice outcome, thus driving behaviour that requires one to exert effort to satisfy this internal need (Ramlall, 2004). These definitions are widely recognized by academic scholars and, the relationship between job satisfaction and motivation is also aligned by researchers. Job satisfaction is concluded to be an emotional response whilst motivation is a behavioural response influenced by the internal personal state (Kian, Rajah, & Yusoff, 2014).

2.5.3.1 Classical theories of motivation and satisfaction

Frederick Herzberg and Abraham Maslow are notable academics in traditional concepts associated with motivation theories whilst Victor Vroom is also a classical theorist in the associated field of job satisfaction.

Herzberg's motivation-hygiene theory, also know as the two factor theory, identified motivators that lead to employee satisfaction and hygiene influences that lead to dissatisfaction. In this theory, intrinsic factors such as personal growth, responsibility and recognition result in employee motivation whilst extrinsic factors such as supervision and rewards all influence the job satisfaction (Shurbagi, 2014)

Maslow's motivational theory posit motives or needs as hierarchial thus a need that has been satisfied no longer acts as a motivator and it is replaced by the motives in the subsequent level of the hierarchial pyramid (Trivedi & Mehta, 2019). This theory, defined as Maslow's hierarchy of needs, views job satisfaction and motivation as self-actualising or psychological thus management can apply this theory to motivate employees by satisfying emerging or unfulfilled needs and desires (Ramlall, 2004). Figure 2, below, show the pyramidical structure of Maslow's hierarchy of needs as outlined by Trivedi & Mehta (2019).

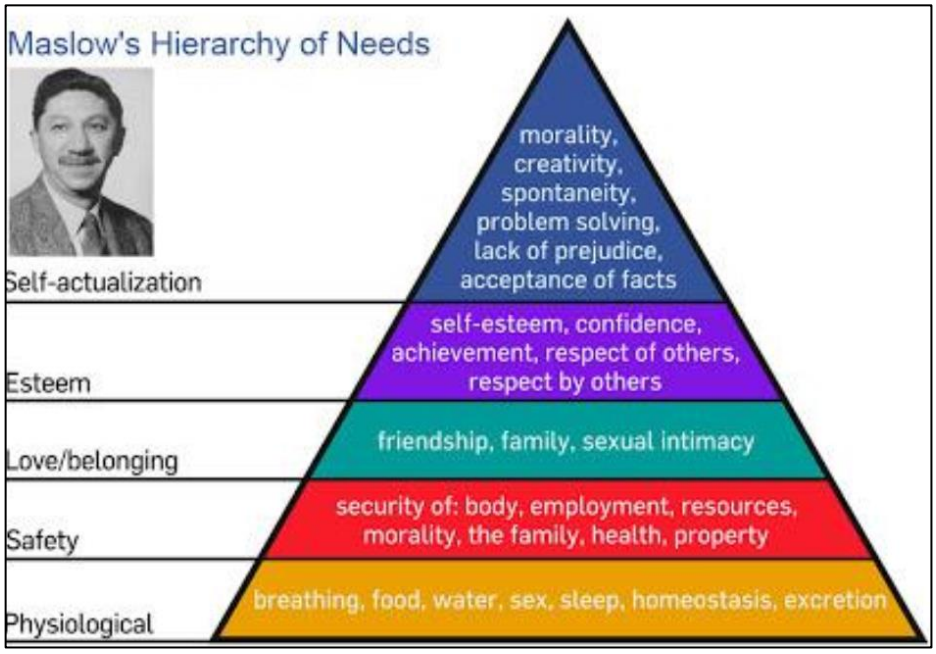


Figure 2: Maslow's Hierarchy of Needs

Source: (Trivedi & Mehta, 2019)

Vroom's expectancy model, also viewed from a psychological lens, theorised that motivation in based on expectancy, instrumentality and valence, where employees are motivated by the following beliefs (Radebe, 2018):

- Expectancy – increased efforts leads to greater performance
- instrumentality – increased performance results in greater rewards
- valence – value is placed on the desired rewards and outcomes

According to Radebe (2018), Vroom's model can be simplified by associating effort, expectations and rewards. This is further supported by Kumar and Prabhakar (2018), in research that concluded that Vroom's theory is proven with a clear link between rewards and results, whilst also outlining that knowing employee expectations is essential in motivational policies (Kumar & Prabhakar, 2018).

2.5.3.2 Additional theories arising from classic theories of motivation and satisfaction

Edwin Locke and Gary Latham are two distinguished theorists who have built on the classic theories of motivation and satisfaction. Their contributions to research relating to expectations and goal-setting have provided half a decade of academic literature relating to goal-setting motivational theories.

Their theory postulates higher performance and job satisfaction can be achieved if specific, challenging goals are set, and employees are committed and receive feedback on those goals (Locke & Latham, A theory of goal setting and task performance, 1990). Figure 3, below, show Lunenburg's (2011) simplified view of Locke and Latham's goal-setting theoretical model. This view of the Locke and Latham theoretical process can be summarized as follows (Lunenburg, 2011):

- Individal or personal values creates a desire or emotional response to perform actions that align with those values.
- Specific, attainable, deadline-driven goals must be set, and the individual must accept these goals.
- The individual will direct attention and action to these goals, in line with their value-motivated desire. Challenging goals may lead to individual strategy development with increased effort, energy mobilisation and persistence towards the goal pursuit.
- Goal attainment is the desired outcome, and when achieved, these can result in individual satisfaction and further motivation thus fuelling values and emotions for future goals. Conversely, if goals are unfulfilled, individuals may be frustrated by this outcome and this can lead to lower motivation that negatively impacts the individual's satisfaction and motivation.

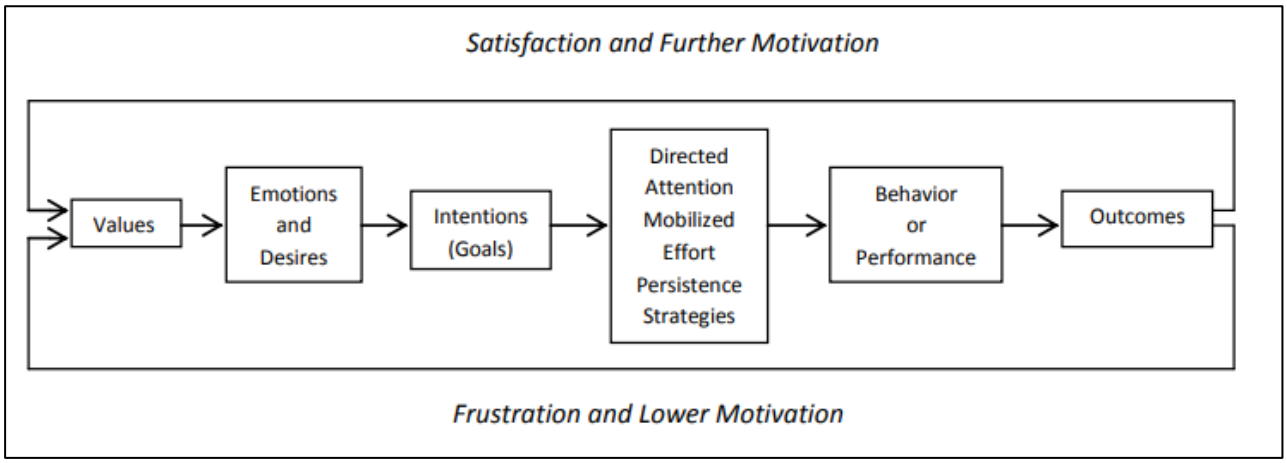


Figure 3: Lunenburg's simplified model of goal-setting theory (Lunenburg 2011; p2)

Ramlall (2004), in research assessing the importance of motivational theories in employee retention practices, referenced the mentioned Locke and Latham's goal-setting theory as well as other contemporary theorists such as:

- Hackman and Oldham's Job Characteristics Model (1980) – similar to Herzberg's motivator-hygience theory, Pinder (1984) argues the job charactertistics model is based on satisfaction and motivation being built into an employee's job design. This ensures that aspects such as personal responsibility, meaningful work and performance feedback is featured in job design, whilst also including job variety, which differs from Herzberg's approach (Pinder, 1984).
- McClelland's Needs Theory (1961) – Ramlall (2004) assosicates this theory with three key needs for motivating employees which were achievement, power and affiliation. The three needs drive individuals to strive for success, influence over others and faithful interpersonal relationships (Ramlall, 2004)
- Adams' Equity Theory (1965) – Bekal & Warrior (2017) posit the equity theory as motivating individuals to adapt their performance or output based on their perception of equity. Thus, employees are motivated by their perceived fairness in relation to their peers, whilst conversely, employees will be highly de-motivated if they perceive inequity or an environment that lacks fairness (Bekal & Warrior, 2017).

Academics continue to investigate the mentioned motivational models in the workplace, and researchers consistently conclude that job satisfaction and employee motivation have an impact on talent retention. Consequently, in the context of remote, copper mining projects, job satisfaction and employee motivation is considered a key ingredient to retaining talent especially due to the complexity and challenging mining environment.

Furthermore, the review of the job satisfaction and motivational literature indicates that outcomes or rewards play a vital component to motivational theories. According to Chowdhury (2014), modern

retention strategies across all industries is affected by rewards, and, as shown, employee motivation is strongly associated with talent rewards (Chowdhury, 2014). In the next subsection, literature relating to employee rewards is further assessed to appreciate the concept and the magnitude of influcence on talent retention.

2.5.4 A review of Employee Rewards – impact in talent retention

Rewards, or a total rewards system, is an essential framework for any organisation to maintain job satisfaction and employee motivation, thus driving the core talent management focus of employee retention. According to Mohamed-Padayachee (2017), an organisation's total rewards system is a key strategic framework to retain talent. A total rewards system that incorporates a reward framework is vital to establish a companies' competitive advantage in retaining talented employees (Mohamed-Padayachee, 2017).

Barel (2014) posit the total rewards concept is set on the premise that employees perform work for more than monetary benefits. Along with money or their salaries, individuals also value non-monetary benefits in 'exchange for their time, talents, efforts and results' (Barel 2014, p15). Similarly, El Sayed et al (2021) put forward that employees are encouraged to remain within an organisation if they are rewarded in financial and non-financial terms. Armstrong (2010) also outlines a similar outlook, where total rewards is defined as incorporating traditional, tangible rewards such as salary, with elements that associate with the work experience. Facets associated with the work experience include career development, job satisfaction and the ability to achieve successful results. These intangible elements are considered as key strategies of an effective rewards management system as employees value being recognised for their contributions to the organisational goals (Armstrong, 2010).

2.5.4.1 Theories on the Total Rewards model

In research relating to the Total Rewards model, Mohamed-Padayachee (2017) identified total rewards frameworks which have significantly contributed to the body of knowledge relating to total rewards strategies. Some of these frameworks include:

- Zingheim and Schuster total rewards model (2000) – this model can be described as a four-category framework that is interlocked and directly related to each other, with a view to achieving value for all stakeholders (Mohamed-Padayachee, 2017). These four categories include (Zingheim & Schuster, 2000: p13):
    - A compelling future – individuals consider a company to have compelling future if they are convinced by the vision, brand and growth of the business, thus making the company an attractive employer.

- A positive workplace – employees value leadership, trust, collegiality and effective communication in their working environments. These aspects, accompanied by meaningful work and recognition, contributes towards a positive workplace.
- Individual growth – companies that offer growth and development opportunities, along with positive feedback and coaching, create an enviroment that individuals desire. These are considered rewards that employees value as part of the total rewards.
- Total pay – individuals work for money therefore pay or remuneration is a foundational reward for their efforts. Remuneration includes base pay, performance-related or variable pay, benefits as well as recognition and celebration. Clear and critical messaging must align to the facets of total remuneration for employees to embrace this component of total rewards (Zingheim & Schuster, 2001)

- The Hay Group total rewards model (2008) – this six-category total rewards model comprises:
  - One category associated with tangible rewards, which includes factors such as competitive pay, benefits, performance incentives, potential for ownership, awards for recognition, and rewards for fairness (Schlechter, Faught, & Bussin, 2014)
  - Five intangible rewards categories, namely: quality of work, future growth opportunities, inspiration or values, enabling environment, and work-life balance (Armstrong, 2010).
  - The Hay Group model can be further described by their respective intrinsic and extrinsic elements (Mohamed-Padayachee, 2017):
    - Extrinsic elements, associated with the one tangible reward category – includes base cash, short-term variable, long-term rewards/incentives, passive benefits and actives benefits.
    - Intrinsic element, associated with the five intangible reward categories – the intrinsic reward element is known as engagement factors.
- WorldatWork Total Rewards Model (2015) – the WorldatWork total rewards model was initially developed as a three-factor model, thereafter progressed to a five-factor model, and more recently, in 2015, to a six-element model (Marin, 2021). The model is developed to 'collectively define an organisation's strategy to attract, motivate, retain and engage employees' (Mabaso & Dlamini, 2018: p3). Figure 4, below, show the WorldatWork model, and the six elements include:
  - Compensation – as with the other rewards models, compensation refers to fixed and variable pay or remuneration that employees receive for their effort, time, skill and performance (Bussin & Toerian, 2015)

- Benefits – consist of non-cash or indirect forms of compensation that supplement monetory rewards and is used to support the organisation's critical messaging to employees regarding the employer's brand (Mabaso & Dlamini, 2018)
- Recognition – rewards targeted towards recognising employee contributions, with dedicated programs or occasions that showcase and build organisation culture by celebrate and validate these individuals (Klaas, 2024)
- Performance management – Establishing expectations to align the individual efforts with organisational goals, whilst providing ongoing assessment and feedback to employees regarding these targets (Mohamed-Padayachee, 2017). According to Mabaso et al (2021), employee performance is negatively impacted if performance measurement systems are not implemented correctly, directly resulting in increased employee turnover due to misalignment with organisational goals.
- Talent development – includes employee development and career opportunities as rewards that display the organisation's support, thus enabling employees to perform better and advance their career ambitions (Barel, 2014)
- Work-life effectiveness – also known as work-life balance, this reward element is associated with the organisation's strategic initiatives to support employees in achieving effective balance at work and external of the working environment (Pregnolato, Bussin, & Schlechter, 2017)



Figure 4: WorldatWork six-element Total Rewards Model

Source: Business Wire (2015)

The literature relating to employee rewards demonstrate a clear relation to talent retention and development. The Hay Group total rewards model (2008) and WorldatWork Total Rewards Model (2015) are two of the leading frameworks in the modern era, and both refer to employee engagement, career opportunities and work-life balance. In remote, copper mining projects, these elements are directly influenced by project managers, lead engineers and departmental leaders therefore the review of employee rewards literature has relevance in creating a literary framework for the assessing the impact of leadership styles on talent retention.

The theory of work-life balance has gained popularity in recent years, following the disruptions to working arrangements during the COVID-19 pandemic (McKinsey & Company, 2021). The concept of work-life balance is briefly explored in the next subsection to assess if it has a significant impact on talent retention and leadership styles in remote working areas.

2.5.5 An overview of the work-life balance concept – impact on talent retention

2.5.5.1 Defining work-life balance

Bataineh (2019) defines work as official tasks required by employees to accomplish the goals of their given job, whilst life 'encompasses a collection of activities not related to work' (Bataineh, 2019: p99). Similarly, Khateeb (2021) defines work-life balance as spending energy, resources, time and commitment on different aspects and domains of life, each of which provides a fulfilling experience to the individual. Work-life balance is commonly associated with balancing work with family commitments, however work-life balance incorporates many other aspects such as 'community, social, religious and leisure roles taken up by an individual' (Khateeb, 2021; p28).

2.5.5.2 Work-life balance in the modern era

According to Rodrigues-Sanchez et al (2020), current businesses are realising the importance of work-life balance due to the loss of talent which directly increases management difficulties. Human resource departments in many western countries are finding that more employees are valuing work-life balance over remuneration benefits, hence this key talent management factor is recognised as an important aspect of employee retention (Wolor, Kurnianti, Zahra, & Martono, 2020). In this context, organisations are dedicating specific human resource management strategies to the great range of factors that influence work-life balance (Rodríguez-Sánchez, Gonzalez-Torres, Montero-Navarro, & Gallego-Losada, 2020).

The effectiveness of an organisation can be improved if employees feel the benefits of work-life balance, whilst retention can be positively influenced when employees experience this improved quality of life (Bataineh, 2019). Neethling (2023) notes that managers are required to give attention to employees' personal lives and engagements if they want to be successful in retaining talented

teams. According to Wolor et al (2020), employee behaviour, attitudes, and performance are all positively influenced if employees feel balanced between work commitments and personal factors, thus contributing to retention, specifically for millennial generation employees.

In similar research relating to millennial generational employees, Silaban & Margaretha (2021) also posit employee attitudes can be affected by work-life balance and millennial generational employees consider work flexibility valuable to job satisfaction. It is crucial that managers understand the impact of work responsibilities on their employees, as too much work responsibilities may result in an negative impact to employees' personal life thus risking higher rates of employee turnover (Neethling, 2023). Employee retention concerns can be avoided by affording employees a good quality of work-life balance, whilst creating a working environment and facilities that increases employee motivation (Silaban & Margaretha, 2021).

The literature on work-life balance reveals that this concept has a direct impact on employee's job satisfaction, motivation and performance. It is particularly relevant to millennial generational employees, where literature points to work-life balance alongside remuneration as a key factor in employee commitment.
This aspect becomes increasingly important for remote, copper mining projects in the DRC since employees are required to spend substantial time based at the project location, away from their home base. This implies that employees endure long periods away from their families, within the challenging environment of a secluded mining camp site in a foreign country. The literature strongly suggests that work-life balance has a significant influence on talent retention in remote, copper mining projects in the DRC. Therefore, appropriate leadership styles and behaviours are critical to counter the adverse talent retention effects caused by reduced work-life balance in remote, copper mining projects in the DRC.

2.6 Leadership and Talent Management: An overview

The detailed literature review showed many correlations between leadership factors and, employee development and talent retention across different industries and demographics. The main findings from these
literary studies are set out in this overview of research relating to leadership and talent management.

2.6.1 The relationship between leadership and talent management

Nkomo et al (2020) postulated that career development is a collabration between employees and employers, and requires organisation assistance and individual investment to achieve success in the process. Management or leaders are positioned in organisational roles as the employer's representative, thus Nkomo's view proposes that leadership may influence employee development.

Similarly, Maaitah (2018) promotes for managers or leaders to demonstrate an interest for their employees and show personal concern for them, as this increases their chances of retaining these talents for the organisation. Employees' likelihood of remaining with a company is heightened when their leaders or managers provide recognition and frequent positve feedback (Maaitah, 2018). Team communication, objectives and skills enhancement are also viewed as imperative factors to improve employee retention and performance (Appanah & Pillay, 2020). Employees are further likely to remain in the organisation if their leaders adequately match their capabilities with their roles, whilst also clearly defining what is expected in their roles (Maaitah, 2018). Gwavuya (2011) suggests that employee retention can be influenced by leadership since leaders have the ability to create a specific mood within the working environment.

Theories of authentic leadership further supports Gwavuya (2011), as it proposes combining talent development ideas with authentic leadership, since leaders' who utilise their talents may 'directly or indirectly inspire others' thus stimulating authentic talent development (Debebe 2017: p.433). According to Avolio et al (2004), authentic leaders demonstrate a value-based approach that aims to establish credibility, trust and respect in their followers, and fosters collabrative relationships by creating a culture of inclusivity and diversity. Authentic leaders lead through their actions, in a manner that is genuine and this approach has a cascading effect, as followers may emulate the leader's authenticity thus creating a positive organisational culture over time (Avolio, Gardner, Walumbwa, Luthans, & May, 2004). Research relating to authentic leadership in project delivery suggests this style of leadership is useful in project alliance contracts (Lloyd-Walker & Walker, 2011). Alliance contracting is notably relevant to EPCM contracting, as engineering companies, such as DRA Global, are seeing more alliance type contracting for mega mining projects similar to remote, copper projects in the DRC (PWC Australia, 2016).

2.6.2 Leadership and talent management: African Projects

In an African project context, multiple studies have been completed to assess the impact of leadership styles on talent retention and employee development, and these are tabulated in Table 5, below.

Mey et al (2021) studied the influence of leadership behaviours on talent retention relating to South African employees. Behaviours aligned with creating an engaging culture and facilitating development and growth was found to support talent management practices and retention of skills, whilst enabling an environment for flexibility and freedom delivered similar benefits (Mey, Poisat, & Stindt, 2021). Mamokhere et al (2023) recently assessed the behavioural and visionary leadership styles relating to service delivery in South African municipalities. Democratic, transformational and

servant leadership styles was found to positively influence employee morale, engagement and innovation, whilst autocratic, laissez-faire, transactional and bureaucratic leadership behaviours were found to stifle learning, creativity, efficiencies and flexibility (Mamokhere, Mabunda, Chauke, & Netshidzivhani, 2023).

According to Adogbo et al (2017), in a study of the Nigerian construction industry, the transformational leadership style is recommended for consulting firms as these leadership behaviours develop positive influences across many facets of the business and improves overall productivity. Innovation is also improved with the transformational leadership style and this is a significant competitive advantage in the current market (Adogbo, Kolo, & Nzekwe, 2017). Similarly, Gwavuya (2011) found that staff turnover is directly influenced by leadership style in academic institutions in Zimbabwe. Respondents suggested that they would consider leaving the organisation if leadership stifled their opportunties or did not display a strategy directed towards employee growth (Gwavuya, 2011).

Table 5: Summary of recent Leadership Style research within an African context

Researcher	**Leadership Styles**	**Findings/Recommendation**
Mey et al (2021)	Transformational style	South African employees' talent retention correlated with leadership behaviours associated with the Transformational leadership style
Mamokhere et al (2023)	Democratic style Autocratic style Laissez-faire style Transformational style Transactional style Bureaucratic style Servant style	Transformational, democratic and servant styles, are found to yield a positive impact on service delivery performance in South African municipalities. Autocratic and Laissez-faire styles have minor positive impacts however the negative influence can be detrimental to performance.
Adogbo et al (2017)	Transformational style Transactional style Laissez-faire style	Within the Nigerian construction industry, Transformational leadership styles improve morale, productivity and many other organisational effectiveness measures. This style also provides greater knowledge management benefits than Transactional or Laissez-faire.

2.6.3 Leadership and talent management: the mining industry

Though specific literature relating to remote mining projects in the DRC was not found, some academic papers tested the relationship between leadership and talent management factors in other mining environments.

In the Zimbabwean mining environment, Chikove and Shiri (2021) advocates for a democratic leadership style, which includes effective communication, semi-autonomous team work and positive industrial relations. Employees who are intriniscally motivated will have higher job satisifaction, thus contributing to lower turnover intention (Chikove & Shiri, 2021). According to Kekgonegile (2014), a leaders' response to well-being is also considered a significant driver of talent retention in the Botswana mining environment. Employees who experience burnout or exhausation in this environment tend to increase their intention to quit (Kekgonegile, 2014).

The DRC mining environment differs from other jurisdictions, however the findings from the above studies provide valuable insight towards the extent of leadership influence on talent management in the demanding mining environment.

2.6.4 Leadership and talent management: a demographic perspective

Appanah & Pillay (2020) posit, in research focused on millennial employees, that strong relationships are key to improving performance whilst mutual respect and ethical behaviour are essential leadership factors that contribute to employee retention. Similarly, Silaban & Margaretha (2021) also outlined the influence of leadership on employee attitudes and work-life balance, and described it to be valuable to millennial generational employees. Van Hoek (2016) had comparable conclusions for millennials in the mining industry, as this generation valued leaders who presented opportunities for innovation and accountability.

On the opposite scale of the age demographic, Onyeaku (2020) concluded that experienced employees also place emphasis on employee engagement whilst positioning transformational and transactional leadership behaviours as key to employee retention.

For this study, all demographics within the remote, copper mining project environment are included in the research. The above literature findings, focused on the specific demographics, indicates that it is prudent to analyse leadership and talent management studies through a demographic perspective.

2.6.5 Leadership and talent management: a summary of the literature

As demonstrated in the previous subsections, academic literature relevant to leadership styles and talent retention has been widely researched. Though research directly associated with remote, copper mining in the DRC was not found, this study attempts to assess relevant literature across

the academic landscape to develop a conceptual framework for the research environment. A selected summary of the relevant literature review research papers is shown in Table 6, below.

Table 6: Summary of selected researcher's conclusions from their respective research papers

Researcher	**Research Environment & Demographic**	**Leadership Styles that have a positive influence on Talent Retention and Development**
Van Hoek (2016)	Mining (Africa) Millennials (under 40 years old)	Leadership styles strongly impact employee retention and development. Transformational leadership behaviours such as providing innovative freedom and work-life balance are key to positively influence employee retention.
Appanah and Pillay (2020)	Manufacturing (South Africa) Millennials (under 40 years old)	Leadership styles strongly impact employee retention. Transformational leadership behaviours such as relationship-building, enhanced communication and engagement on growth opportunities are key to positively influence employee retention. Transactional leadership behaviours such clear and direct performance management was noted has positively influencing talent retention
Chikove and Shiri (2021)	Mining (Zimbabwe) All Employees	Leadership styles impact employee retention. All transformational leadership factors had an impact on increasing employee retention, with Intellectual Stimulation behaviours being the strongest positive correlation. Only one Transactional leadership behaviour, Contingent Reward, had a positive impact on employee commitment.
Kekgonegile (2014)	Mining (Botswana) All Employees (all demographics)	Leadership styles strongly impact employee retention. Transformational leadership behaviours such as employee well-being and leaders' involvement in talent management factors are key to positively influence employee retention

Ochurub et al (2022)	Mining (Namibia) All Employees (all demographics)	Leadership styles impact employee retention. Transformational leadership behaviours such as providing career development planning including coaching and mentorship are key to positively influence employee retention
Gwavuya (2011)	Tertiary Institutions (Zimbabwe) All Employees (all demographics)	Leadership styles strongly impact employee retention. Transformational leadership behaviours such as people-focus, employee empowerment and development opportunities are key to positively influence employee retention
Mey et al (2021	Private & Public Organisations (South Africa) All Employees (all demographics)	Leadership styles strongly impact employee retention. Transformational leadership behaviours such as providing a sense of belonging, and the flexibility and freedom in executing their duties are key to positively influence employee retention
Onyeaku (2020)	Subject Matter Experts (Global) Experienced Employees (More than 10 years' service)	Leadership styles impact employee retention. Transformational leadership is the most effective style for employee retention. Transactional leadership behaviours such employee engagement and rewards influence affective commitment.
Tiro (2021)	Public Organisation (South Africa) All Employees (all demographics)	Leadership styles minimally impact employee retention. Transformational leadership behaviours did not show significant correlation with employee retention; however, it did show a higher correlation with job satisfaction.
Maatiah (2018)	Public Organisation (Jordan) All Employees (all demographics)	Leadership styles strongly impact employee retention. Transformational leadership and Transactional leadership has a substantial positive influence on employee retention

Alatawi (2017)	Human Resources (California, USA) All Employees (all demographics)	Leadership styles impact employee retention. Transformational leadership has a significant impact on increasing employee retention. Infers that transformational leadership style is an effective managerial style.

2.7 Conceptual Framework – Leadership styles that influence Talent Retention and Development

The relevant literature review revealed a convergence upon similar concepts relating to the influence of leadership behaviours on talent retention and employee development. As noted in Table 6, above, most of relevant literature found that transformational leadership behaviours positively influenced employee development, job satisfaction, employee motivation and work-life balance. This positions transformational leadership style has a significant positive influence on talent retention, irrespective of the research environment.

Some of the selected research also acknowledged transactional leadership behaviours as influential on aspects such as employee rewards and employee engagement. This implies the transactional leadership style has a marginal positive influence on talent retention, although to a much lesser extent than transformational leadership.

From the relevant literature review, laissez-faire leadership behaviours are commonly reported to have a negative effect on talent retention and development. Hence according to Mathew (2013), these behaviours are known as non-leadership behaviours since they have a negative influence on talent retention.

Based on the literature review summary, the conceptual framework for the influence of leadership styles on talent retention is summarised in Figure 5, below.

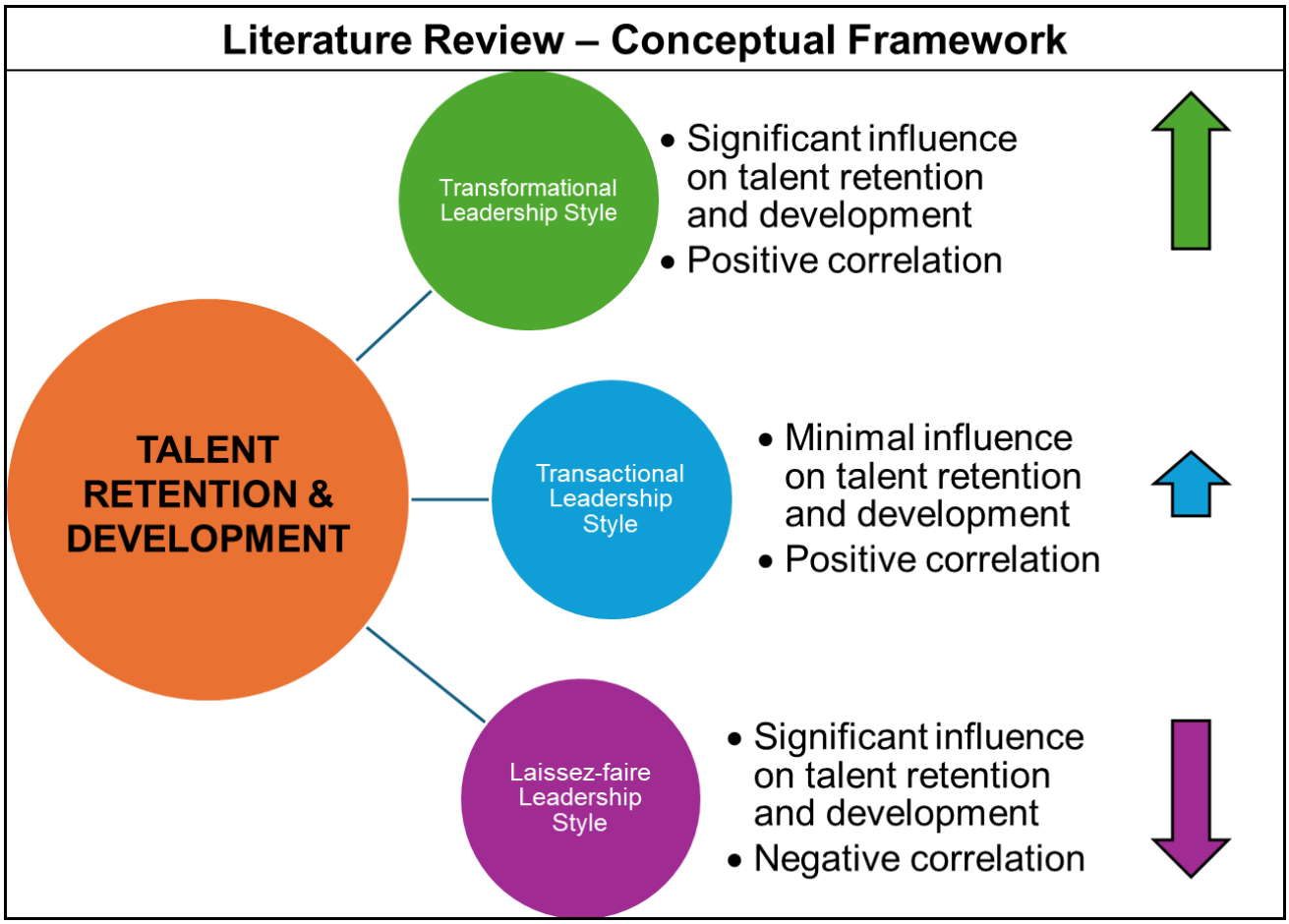


Figure 5: Conceptual framework – Influence of Leadership on Talent Retention (developed by author)

This study intends to verify the above conceptual framework, and the extent to which these leadership styles influence talent retention and development in remote, copper mining projects in the DRC.

CHAPTER 3

3. RESEARCH METHODS

3.1 Research design

A descriptive, quantitative approach is considered research that requires data acquisition and involves gathering information about the experiences and opinions of groups of people 'by asking them questions and tabulating their answers' (Leedy & Ormrod, 2016: p159). Bhawna et al (2015) describe descriptive quantitative research as the exploration of phenomena to identify any correlations that may exist. Statistical or mathematical techniques or models are used in quantitative research to investigate the relationship between two or more phenomena (Bhawna & Gobind, 2015). For descriptive research, a sample of the population is studied in terms of a numeric description of the opinions or perspectives of the population (Creswell & Creswell, 2018). The positivist approach aligns with findings that are quantifiable though the data collected and interpreted by an objective researcher (Dudovskiy, 2024). Leedy and Ormod (2016) describe positivism as an approach to objectively assess human experiences relating to cause-and-effect thus resulting in the uncovering of facts associated with the research goals.

3.2 Parameters of this research

The researcher will acquire information about the perspectives and experiences of professionals who work, or have worked, in remote copper mining projects in the DRC and the study will be directed at understanding how leadership styles might influence talent retention and employee development at DRA Global. Hence, this study uses the descriptive, quantitative, positivist approach.

3.3 Population and Sampling

A study's target population is focused on participants who have knowledge and experience of the specific subject-matter under investigation (Hennink, Hutter, & Bailey, 2010). Professionals working for DRA Global who have experience working on remote copper mining projects in the Democratic Republic of Congo, are examined in this research study. This population was adequate for assessing the phenomena under research, as the research population have experienced the personal challenges and the work-stress pressure of projects in the geographic location. Each participant assessed leadership styles in relation to employee retention and development, within the project environment.

The target population that met the above criteria was all DRA employees who have experience working on remote mining projects in DRC. All members of the target population were not easily accessible therefore a convenience sampling technique was adopted for this study. Vehovar et al

(2016) describe convenience sampling as a non-probability approach with selection based on elements on hand, thus accounting for availability and opportunity whilst also being associated unrestricted sampling. It also allows for the generalizability of the population based on the accessibility of participants (Etikan, Musa, & Alkassim, 2016). Using the convenience sampling technique and a total population size of 50 professionals who are currently working on remote, copper mining projects in the DRC, a representative sample size of 44 was selected based on Krejcie and Morgan's (1970) table of sample size determination (Ahmad & Halim, 2017). The sample included cross-functional departments across different disciplines such as mechanical, electrical, civil, mining and project management professionals. The following participant information is known regarding the employee's project role:

- Mechanical Engineering participants = 11
- Electrical Engineering participants = 11
- Civil Engineering participants = 4
- Mining and Process Engineering participants = 1
- Project Controls participants = 11
- Management participants = 6

Further demographic information on the sample is collected and documented through the data collection process.

3.4 Instrumentation and Data Collection

According to Leedy and Ormrod (2016), common data collection techniques for quantitative studies include checklists, rating scales and rubrics. A rating scale is appropriate when phenomenon such as behaviour or attitude is being gauged and this instrument can 'simplify and more easily quantify' the participants responses across a continuum (Leedy & Ormrod, 2016: p162

Mey et al (2021) use a survey instrument for their quantitative research to assess the correlation between leadership behaviour and talent retention, in the context of the South African public and private organisations. Similarly, Tiro (2021) and Motsepe (2014) administer a rating scale survey questionnaire in their respective quantitative approaches to investigate the relationship between leadership style and turnover intention in a public service office in South Africa (Tiro, 2021) and the relationship between leadership styles and organisational commitment in selected South African universities (Motsepe, 2020).

Gray (2014) describe questionnaires as a measuring tool that is well-recognized for collecting data concerning social characteristics of respondents in a research setting. The data collection instrument used in this study was a Likert scale survey questionnaire with closed-end questions.

3.4.1 Questionnaire Construct

The survey questionnaire was constructed and administered as a single survey with four sections including:

A. Administrative– for collecting data regarding the demographic of the sample population
B. Importance of leadership styles – for collecting data relating to the ideal leadership style and behaviours that participants prefer when working on remote, copper mining projects.
C. Personal experience of leadership styles – for collecting data regarding the participant's personal experience of leadership styles and behaviours when working on their remote, copper mining project.
D. Personal experience of talent retention and development – for collecting data relating to the participant's personal experience of their leader's influence on talent management factors, where the participant's turnover intention and development exposure is measured on their remote, copper mining project.

Similar to Abdulghani (2016), in research relating to the correlation of leadership styles to job satisfaction, this research on leadership styles is operationalized as independent variables whilst the dependent variable is data collected relating to talent retention (Abdulghanti, 2016).

For the collection of demographic data, the first section of the questionnaire (section A) was designed to gather demographic data relating to gender, age, length of service and the participant's role within the project team.

The independent variable data, relating to leadership styles, was collected using an adapted version of the Avolio and Bass (1995) Multifactor Leadership Questionnaire 5x-Short (MLQ 5x-S). The modified questionnaire consisted of twenty-one questions, adapted from the MLQ 5x-S survey and employs a five-point Likert-type rating scale. The answers ranged from "not at all", "once in a while", "sometimes", "fairly often" and "always".

According to Govender (2018), the MLQ 5x-S survey is an instrument that allows participants to rate leadership behaviours. This questionnaire is a "reliable and well-validated instrument" that allows researchers the "capability to distinguish transformational, transactional, and laissez-faire leadership styles (Blackburn, 2020: p50). According to Antonakis et al (2003), the MLQ 5x-S instrument encompasses survey questions used to produce data relating to nine factors of leadership. These nine leadership factors or behaviours allow for leadership outcomes to be assessed based on the transformational, transactional or laissez-faire leadership styles (Antonakis, Avolio, & Sivasubramaniam, Context and leadership, 2003). The MLQ 5x-S has three leadership

constructs and their respective leadership behaviours were described in the literature review. These factors or behaviours include (Saxe, 2011):

- Transformational leadership
    - Idealised influence (behaviour)
    - Idealised influence (attributed)
    - Inspirational motivational
    - Intellectual stimulation
    - Individual consideration
- Transactional leadership
    - Contingent reward
    - Management-by-exception (active)
    - Management-by-exception (passive)
- Laissez-faire leadership

Similar to the MLQ 5x-S rater form, the modified leadership questionnaire provides a perspective to assess the participants view on ideal leadership styles (section B), whilst also allowing for a viewpoint on their actual experience (section C) of their leaders within the context of remote mining projects (Saxe, 2011).

The dependent variable data (section D) was collected using a bespoke talent management questionnaire, designed to assess the participant's experience of talent retention and employee development factors, relative to their leaders' behaviours. The survey questions were adapted from similar research pertaining to the relationship between leadership styles and employee retention (Chauke, 2021; Ochurub et al, 2022; Tiro, 2021). A Likert rating scale, with a scale of 5, was employed and the answers ranged from "not at all", "once in a while", "sometimes", "fairly often" and "always" (Neuman, 2014). A rating scale such as the Likert scale, represents a valuable tool in survey research when evaluating phenomenon such as behaviour or attitude (Leedy & Ormrod, 2016).

3.4.2 Survey administration procedure

The Google Forms survey administration tool was used to design the section questionnaires, and the instrument was constructed as a single survey with the four sections and the survey letter of consent. The survey was assessed to take approximately 15 minutes to complete, thus ensuring ease of participation. Refer to Appendix C for the letter of consent and Appendix D for the survey questionnaire.

The survey questionnaire was distributed to the sample population via email link, accompanied by the participant information sheet. Refer to Appendix B for the participant information sheet.

A follow-up email reminder was distributed three weeks after the initial distribution, and individuals were assured of their anonymity and confidentiality in this voluntary participation.
The survey was closed after four weeks and responses were captured and stored for data analysis.

3.5 Data Interpretation and Analysis

According to Neuman (2014), data analysis involves organisation, integration and examination of data whilst searching for trends and patterns that improves the generalized understanding of concepts (Neuman, 2014).

For this research, a Likert scale technique was adopted in the collection of data and the rating scale was coded to ensure all data can be easily analysed through descriptive statistics. Coding is described as a method that allows researchers to perform deep interpretation and understanding of data by means of assigning numeric values or labels on collecting data (Miles & Huberman, 1994). The coding for the 5-point Likert scale questions is shown in Table 7, below, which aligns with scoring in similar MLQ 5x-S research (Saxe, 2011; Mathew, 2013; Govender, 2018)

Table 7: Coding for the rating scale on the MLQ 5x-S survey and Talent Retention survey

Response	Code/Score
Not at all	0
Once in a while	1
Sometimes	2
Fairly often	3
Always	4

Descriptive analysis was used to analyse the coded data. Descriptive analysis and statistics can be used to describe the behaviour of the collected data by utilizing mean, standard deviation and skewness (Tiro, 2021). The relationship between the independent variable (leadership style) and the dependent variable (talent retention and development) is measured by using the Spearman's rank-order correlation rho analysis. Spearman's correlation analysis allows for the monotonic association of leadership style and talent retention to be measured, thus establishing if there is a pattern that fits the collected data (Laerd Statistics, 2024). According to Casinillo & Suarez (2022), Spearman's rho coefficient, r_s, can be used to determine the effect or correlation according to the following ranges (Casinillo & Suarez, 2022):

- $0.0 < r_s < 0.3$ – recommended to have a small or weak association or no practical significance correlation

- $0.3 < r_s < 0.7$ – recommended to have a moderate or medium association or practically visible correlation
- $0.7 < r_s < 1$ – recommended to have a strong or large association or practically significant correlation.

The researcher utilized data gathering software, Microsoft Excel, for the systematic gathering of the survey results thus ensuring efficient organisation of the raw data. This allowed for effective representation of the surveyed data through descriptive analysis, as well as correlation analysis using the Analysis Toolpak Add-ins on Microsoft Excel (Creswell & Creswell, 2018; Govender, 2018).

3.6 Validity and Reliability

According to Leedy and Ormrod (2016), a researcher can only draw conclusions from the collected data if the data is valid and reliable. Accuracy and consistency of quantitative data is essential so researchers can yield positive results regarding the subject matter under research (Leedy & Ormrod, 2016).

As described in the previous subsection, this study makes use of adapted and bespoke questionnaires to assess leadership styles and talent retention factors. Validity of the constructs are measured by use of data triangulation, since the questionnaire and literature are documented as primary and secondary sources of data (Ochurub, Jeremiah, & Iipumbu, 2022). For the adapted MLQ 5X-s questionnaire, which records leadership style data, theoretical validity data can be collected using validated literature of the original structured MLQ 5X-s questionnaire (Govender, 2018). The MLQ 5X-s questionnaire has been validated using factor analysis by numerous authors, all of which confirmed satisfactory construct validity (Antonakis et al, 2003; Antonakis, 2001; Avolio & Bass, 2004; Muenjohn & Armstrong, 2008).

According to Antonakis (2001), the MLQ 5X ‘can be used to represent the full-range model of leadership and it underlying theories’, since a ‘comprehenesive assessment of the validity and reliability’ has been found (Antonakis, Avolio, & Sivasubramaniam, 2003; p283). This literature data validity, along with the questionnaire data validity, allowed the research to be validated via data trigulation.

According to Gliem and Gliem (2003), internal consistency and reliability can be achieved if a rating scale research, such as the Likert-type surveys, is measured for reliability using the Cronbach’s alpha coefficient. Reliability testing using Cronbach’s alpha provides an exclusive reliability estimate whilst using just one test administration (Gliem & Gliem, 2003).

Tiro (2021) referenced multiple similar studies, associated with assessing the impact of leadership style to turnover intention, which used the Cronbach alpha coefficient for testing reliability and internal consistency of the measuring instrument items.

Research by Carless et al (2000), Tummers and Knies (2015), Beehr et al (2006) and Bothma and Roodt (2013), tested similar objectives to this study and yielded Cronbach's alpha coefficient of greater than the acceptable 0.70 (Yong & Pearce, 2013). Internal validity is also a well-recognised concept in research reliability, as it allows for cause-and-effect relationships to be assessed among the research variables (Pillay, 2022).
Cronbach's Alpha and internal validity was applied as the validity and reliability tools used in this study.

3.7 Ethical Considerations

As human subjects formed part of the research methods, ethics clearance was required from the School of Mechanical, Industrial and Aeronautical Engineering Ethics Committee prior to any research commencement. The University's Main Ethics Committee awarded ethics clearance for this research under ethics clearance number MIAEC 138/24. DRA Global also provided written permission for this research to be conducted within their company and amongst their employees. Ethics clearance and the company permission letter is available in Appendix A.

A participant information sheet and letter of consent was presented to each participant when they received the voluntary questionnaire, and all individuals signed the participant consent form before taking the questionnaire. Appendix B outlines the participant information sheet and the letter of consent is shown in Appendix C.

CHAPTER 4

4. INTERPRETATION OF RESULTS AND ANALYSIS

4.1 Introduction

This section documents the results and data analysis of the collected data from the survey questionnaire. A sample size of 44 participants was approached with the research questionnaire, and a total of 44 results were recorded. This represented a response rate of hundred percent.

The results of the questionnaire were analysed by using descriptive methods, ensuring that all demographics and quantitative data is clearly represented and illustrated. Thereafter, the descriptive statistics were used to perform correlation analyses across the range of variables, whilst also allowing for statistical significance computations. All results and analysis were performed using Microsoft Excel and its associated add-on Toolpak for advanced statistical analysis.

4.2 Participant Demographics – Profile and Characteristics

Participants inputs in the first section, Section A, of the questionnaire related to their demographics. The demographics or profile of the sample group was analysed based on the gender, age, years of service and the role within the project team.

The gender distribution of the sample group is represented in Figure 6, below. The gender demographics reveals a significant majority of respondents were male (82%), with female respondents representing a 28% minority.

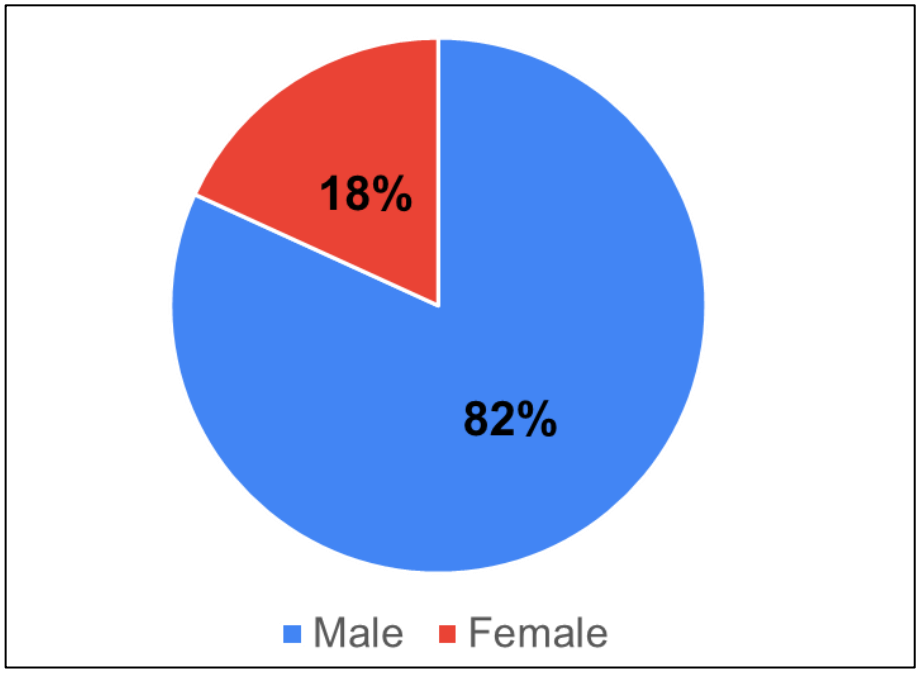


Figure 6: Gender distribution of the sample group

Figure 7, below, show the age distribution of the sample group. A large percentage of the participants fell within the age profile of 30-39 years old (40,9%). A minority of the participants occupy the under-30 age group (6,7%). Most participants fall above the age of 40 years old, which includes participants between 40-49 years old (22,7%) and 50+ years old (29,5%). According to Tiro (2021), employees above the age of 40 years old represent the mature portion of the work force. From the age distribution statistics, there is a good balance between mature and young professionals as approximately 52% of the sample group were above the age of 40 years old whilst 48% were below the age of 40 years old.

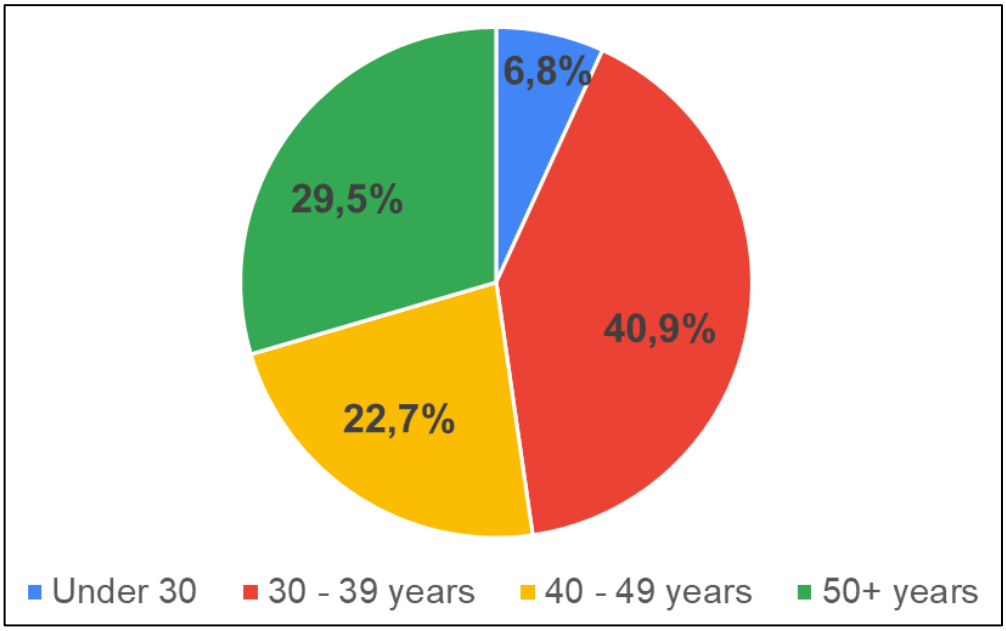


Figure 7: Age distribution of the sample group

The distribution of the participant's length of service is shown in Figure 8, below. Approximately half the participants (48%) were revealed to have 'less than 3 years' of service. This is a large percentage of the sample group that have a relatively low working experience on remote mining projects in the DRC. A quarter of the sample group had notable experience in these projects, as they had length of service that fell within the range of '3-6 years' (16%) and '6-10 years' (11%). Participants with significant experience in this environment, categorised as 'more than 10 years of service', represented 25% of sample group.

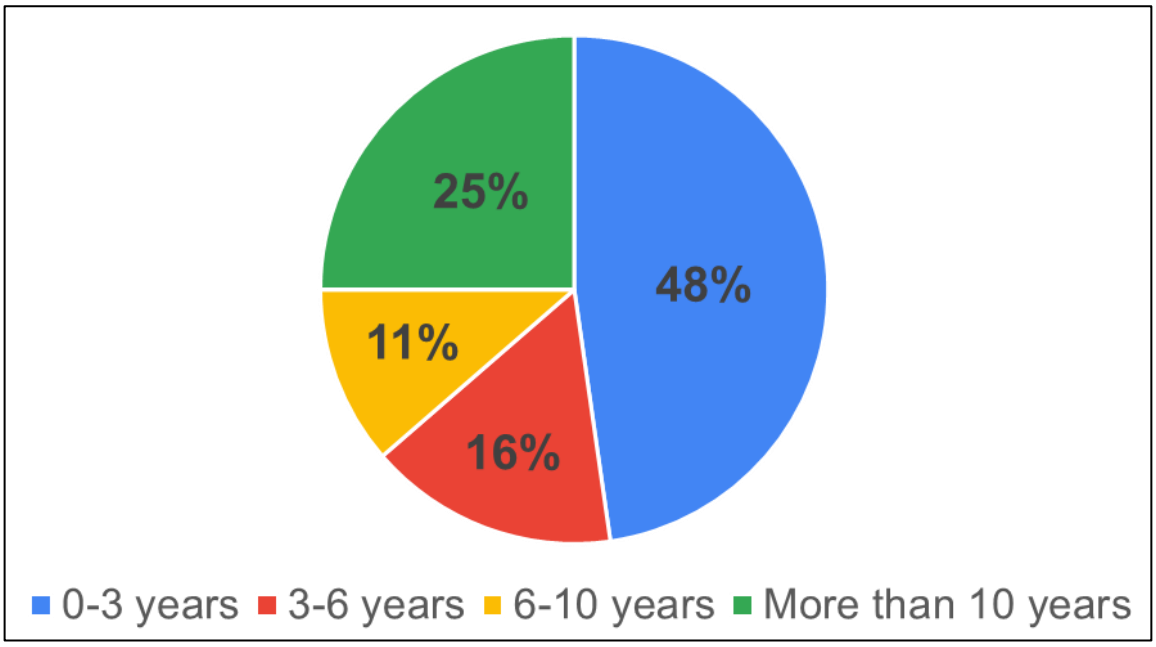


Figure 8: Length of service distribution of the sample group

Figure 9, below, displays the distribution of the six project roles or disciplines within the sample group. This demographic variable reveals an equal distribution of three of the six project disciplines categorizes. The 'project controls', 'mechanical', and the 'electrical, control and instrumentation' division all have the highest presentation of participants in the sample group (38%). Participants holding 'management' positions represent 21% of the sample group. There are four participants noted from the 'civil and infrastructure' discipline, which accounts for 14% percent of the sample group. Only one 'mining and processing' professional participated in the study, which denotes a 3% representation for this discipline.

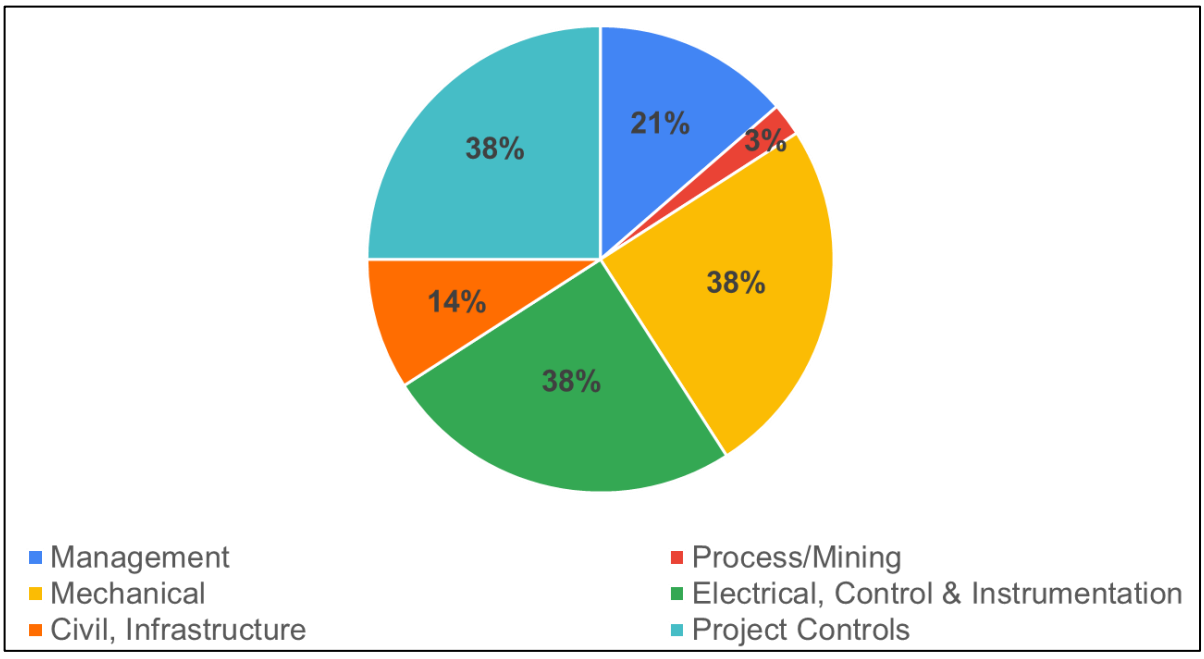


Figure 9: Project role distribution within the sample group

4.3

4.3 Participant Leadership survey – Results and Assessment

The first leadership survey section, Section B, focused on collecting data regarding the importance of leadership styles for each participant. This section would provide each participant's personal view on the ideal leadership behaviours for remote copper mining projects in the DRC.

The second leadership survey section, Section C, focused on collecting data regarding the participant's personal experience of leadership styles. This section would provide each participant's personal experience of their leaders' behaviours whilst working on remote copper mining projects in the DRC.

The twenty-one question leadership survey was used for both Section B and Section C. Once all questionnaire results were coded, the questions were grouped into their respective leadership behaviours based on the MLQ 5x-S construct (Antonakis, Avolio, & Sivasubramaniam, 2003). For the leadership questionnaire, three leadership factors (behavioural idealised influence, attributed idealised influence, and contingent reward) comprised three associated questions, thus accounting for nine of the twenty-one questions. The remaining six leadership factors – inspirational motivational, intellectual stimulation, individual consideration, management-by-exception (active), management-by-exception (passive), and laissez-faire leadership – each had two associated questions, accounting for the remaining twelve questions of the total twenty-one. Refer to Appendix E for the questionnaire surveys relating to the importance and personal experience of leadership styles (section B and section C)

4.3.1 Importance of Leadership – Descriptive Analysis

For survey section B, participants responded to the twenty-one leadership questions, indicating the importance of the leadership behaviours thus establishing a profile of their ideal leader.

Attributed idealised influence (M = 9,82; SD = 1,74), inspirational motivational (M = 6,50; SD = 1,58), individual consideration (M = 6,57; SD = 1,52) and intellectual stimulation (M = 6,48; SD = 1,19) scored high averages relative to their range, scoring above 80% for these factors. This indicates that, on average, most participants voted for their ideal leader to 'always' or 'fairly often' show characteristics associated with these three factors.

Behavioural idealised influence (M = 9,45; SD = 1,59) and contingent reward (M = 9,34; SD = 2,05) also scored high percentages. Both these leadership factors scored just under 80%, thus illustrating that participants also believe their ideal leader must display these behaviours 'fairly often'.

Passive management-by-exception (M = 1,75; SD = 1,71) gained 21,9% for the average to range scoring, revealing their leadership behaviours are only endorsed as 'once in a while'.

Active management-by-exception (M = 1,02; SD = 1,19) and laissez-faire (M = 1,19; SD = 1,19) recorded the lowest averages. The 12,8% and 14,8% respective percentages indicate the average

participant would lean towards ‘not-at-all’ for leadership behaviours associated with these two leadership traits.

Table 8, below, show a summary of the descriptive analysis for the participants response to their ideal leaders’ characteristics. Figure 10, below, show an illustrative view of the mean percentage scores across the nine leadership behaviours, thus giving a visual representation of the average response for participant’s importance of each leadership factor.

Table 8: Descriptive Analysis of ideal leaders’ characteristics – summarised by leadership factors

Leadership Style	Leadership Factor	Min	Max	Mean	SD	Mean (%)
Transformational	Idealised Influence (Behaviour)	6	12	9,45	1,59	78,8%
	Idealised Influence (Attributed)	6	12	9,82	1,74	81,8%
	Inspirational Motivational	2	8	6,50	1,58	81,3%
	Intellectual Stimulation	3	8	6,48	1,19	81,0%
	Individual Consideration	2	8	6,57	1,52	82,1%
Transactional	Contingent Reward	4	12	9,34	2,05	77,8%
	Management-by-exception (Active)	0	5	1,02	1,19	12,8%
	Management-by-exception (Passive)	0	5	1,75	1,71	21,9%
Laissez-faire leadership	Laissez-faire	0	4	1,18	1,19	14,8%

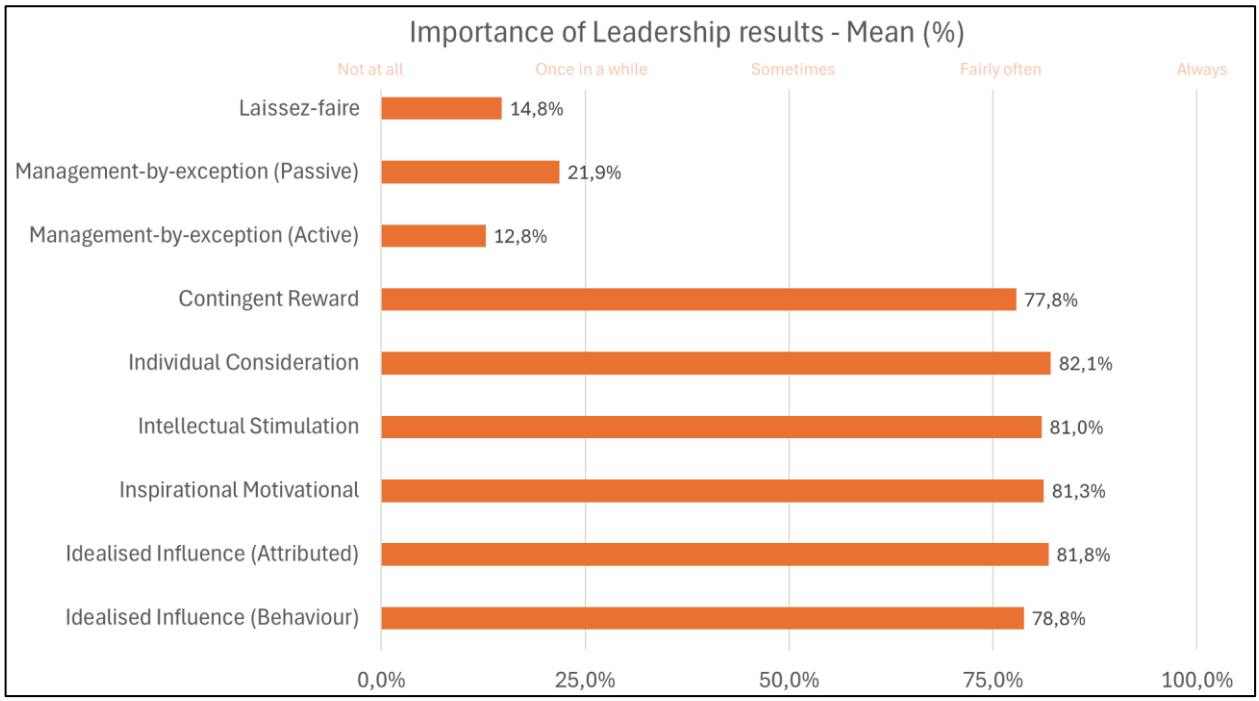


Figure 10: Mean percentage scores for the 'Important of Leadership' survey results

4.3.2 Personal Experience of Leadership – Descriptive Analysis

For survey Section C, participants responded to the twenty-one leadership questions, indicating their personal experience of their leaders' behaviours. Their inputs are used to establish a profile of their personal experience of their leaders' behaviours whilst working on remote mining projects.

Five of the leadership factors scored within 50-75% for the average across their range, illustrating that most participants selected 'fairly often' or 'sometimes' for these factors. These five factors include behavioural idealised influence (M = 7,86; SD = 2,95), attributed idealised influence (M = 8,34; SD = 2,72), inspirational motivational (M = 5,45; SD = 1,89), intellectual stimulation (M = 5,36; SD = 1,88), individual consideration (M = 5,25; SD = 2,21), contingent reward (M = 7,02; SD = 3,34).

Passive management-by-exception (M = 2,52; SD = 1,61) and active management-by-exception (M = 2,43; SD = 1,74), scored 31,5% and 30,4% respectively. This implies that participants also believe their leaders' exhibit management-by-exception behaviours 'once in a while', leaning towards 'sometimes'.

On average, participants scored laissez-faire (M = 2,05; SD = 1,99) just under 25,6%, revealing their leaders' display laissez-faire behaviours 'once in a while'. Figure 11, below, show an illustrative view of the mean percentage scores across the nine leadership behaviours, thus giving a visual representation of the average response for participants' personal experience of each leadership factor.

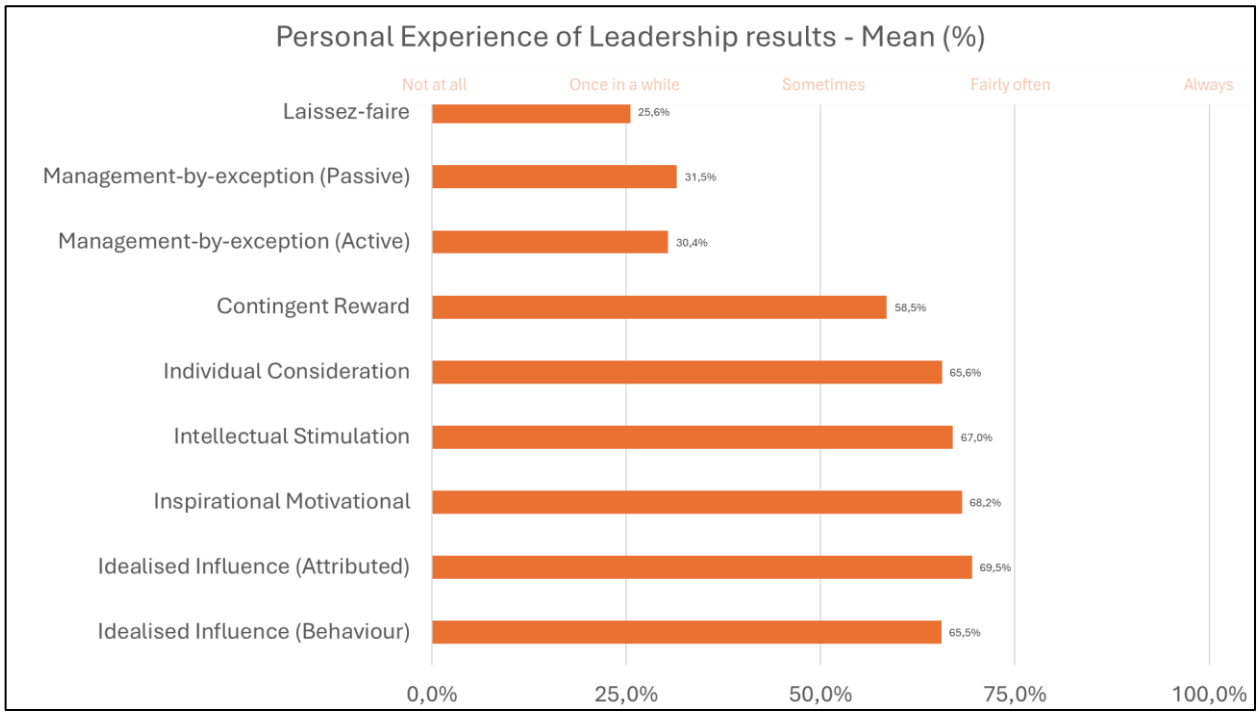


Figure 11: Mean percentage scores for the 'Personal Experience of Leadership' survey results

4.3.3 Leadership styles and Demographics – Descriptive Analysis

The recorded survey results from the two leadership sections, section B and section C, were captured and categorised by participants respective demographics, which were captured in section A.

Figure 12, Figure 13, Figure 14 and Figure 15, below, show the categorised average data for the section B, 'importance of leadership', survey results, relative to age, gender, years of service, and project role. Some of the notable observations were (based on the 0-4 scoring range):

- Gender category – 'female' participants recorded a higher average score (3,66) for the importance of transformational leadership, than 'male' participants (3,14). Conversely, 'male' participants recorded a higher average score (0,64) for the importance of laissez-faire leadership, than 'female' participants (0,38)
- Age category – participants 'under the age of 30 years old' scored significantly low (0,17) for the importance of laissez-faire leadership. The importance of transactional leadership was valued by the age group '30-39 years old' (1,61), as they scored approximately 10% more responses than any other age group.
- Years of service category – long serving employees and those with '3-6 years of service' both scored transformational leadership traits as important (3,43 and 3,49 respectively). Newer employees, who are within the first three years of service found a close range between the transformational leadership behaviours and laissez-faire leadership behaviours (3,12 and 0,74)

- Project role category – The ‘project controls’ category scored highest average rating for the importance of transformational leadership (3,52), whilst the civil and infrastructure group scored the lowest for this leadership style (2,93). The individual ‘process/mining’ participant scored the laissez-faire leadership behaviours significantly higher than the other project roles (1,5).

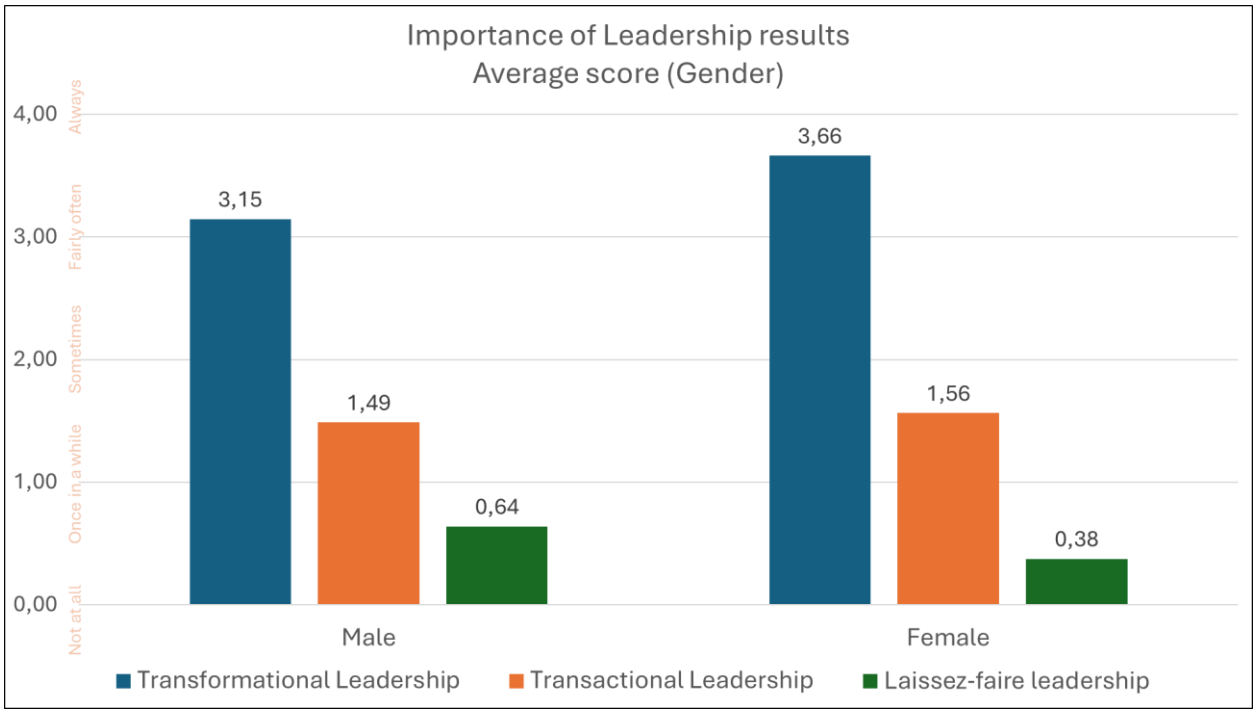


Figure 12: ‘Importance of Leadership’ results – ‘gender’ demographic category

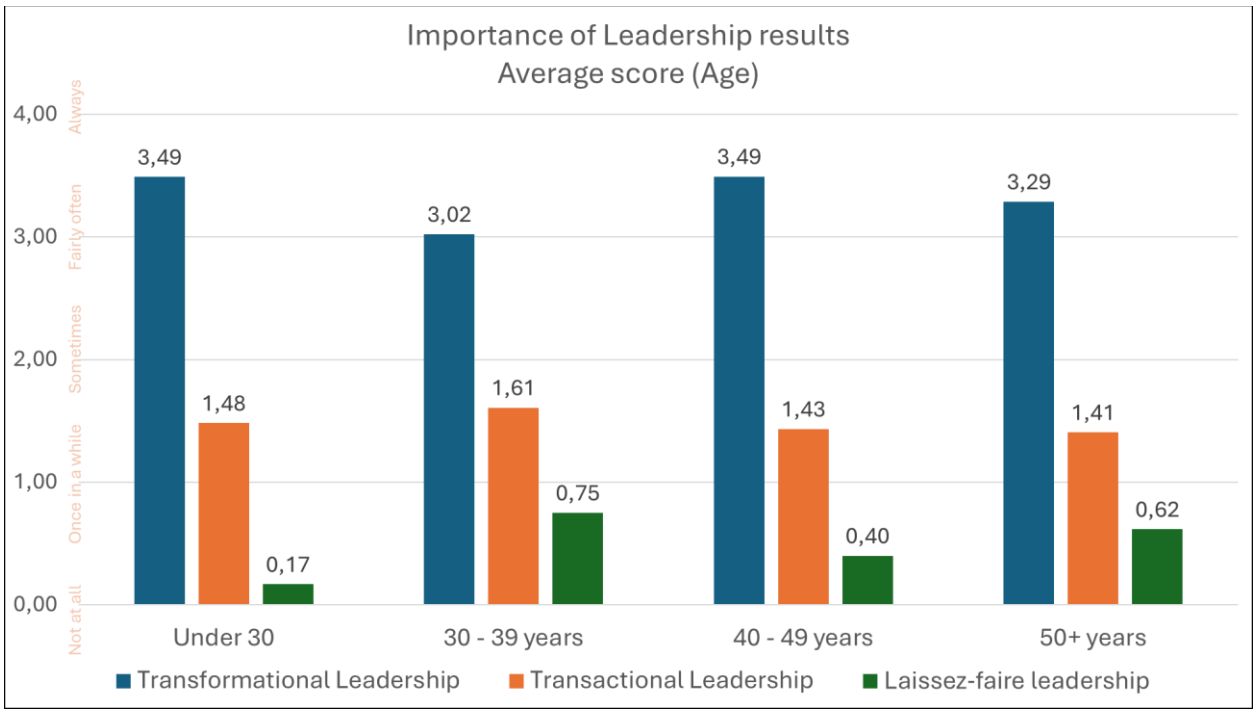


Figure 13: ‘Importance of Leadership’ results – ‘age’ demographic category

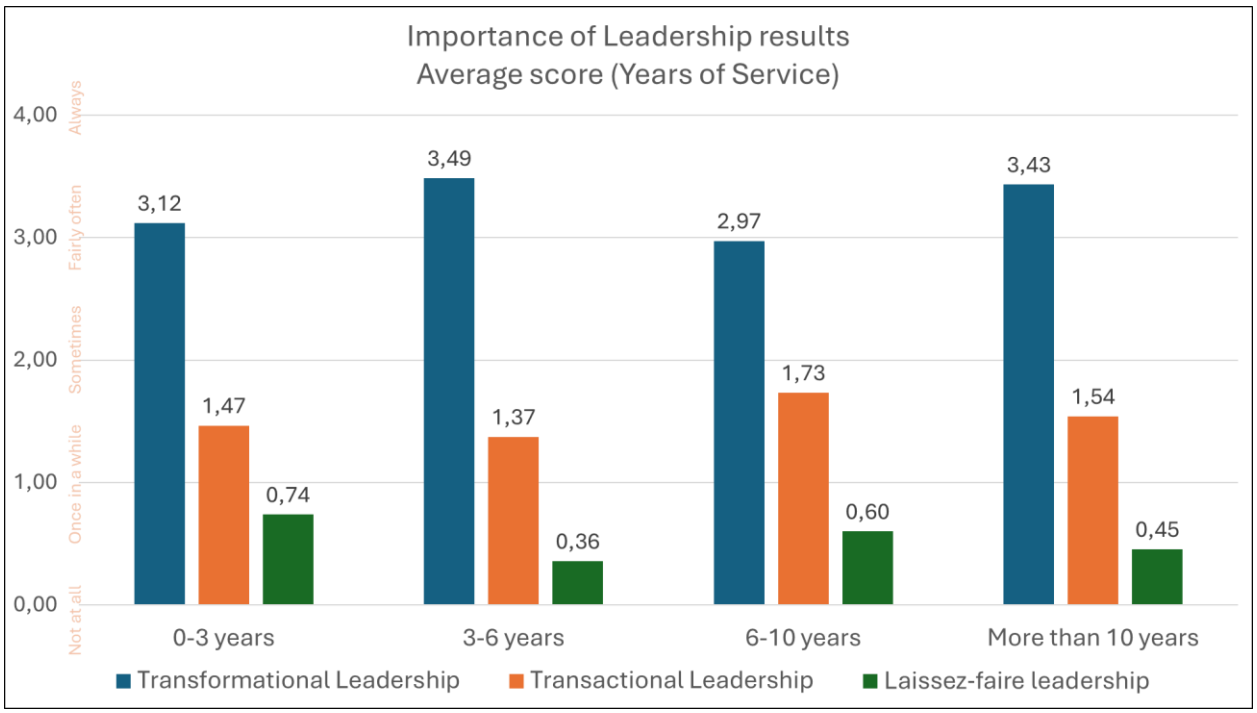


Figure 14: 'Importance of Leadership' results – 'years of service' demographic category

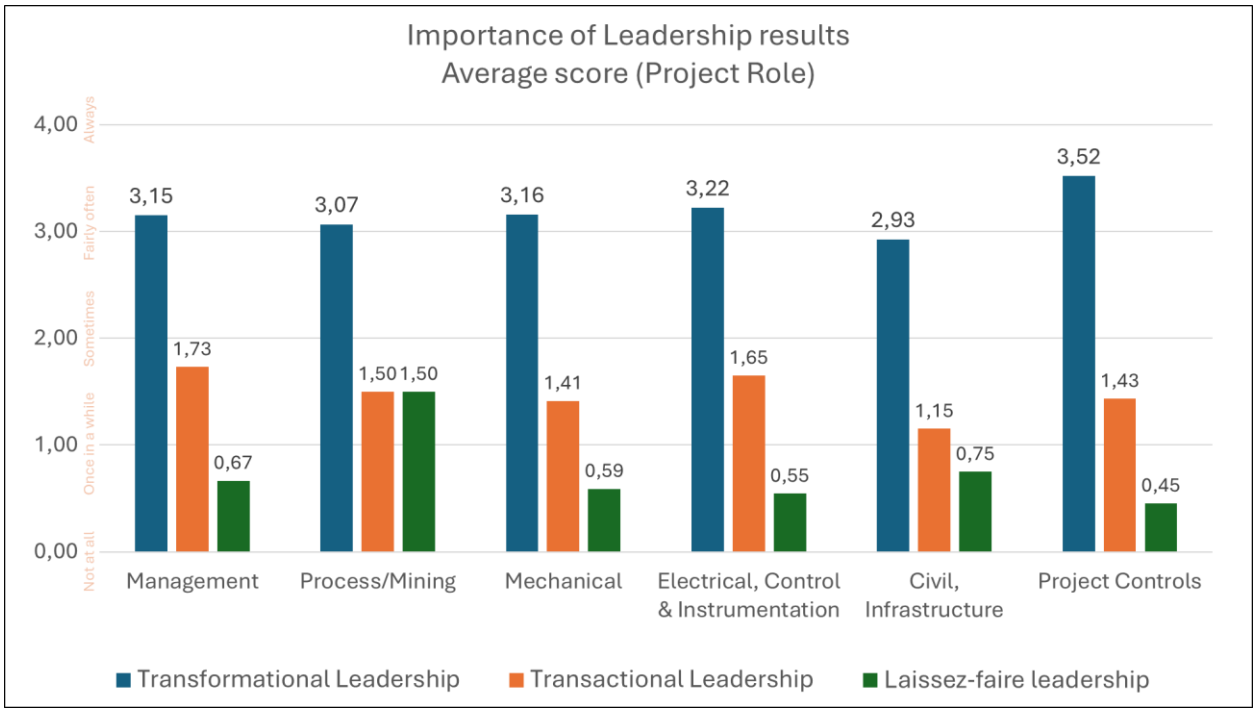


Figure 15: 'Importance of Leadership' results – 'project role' demographic category

Figure 16, Figure 17, Figure 18 and Figure 19 below, show the categorised average data for the section C, 'personal experience of leadership', survey results, relative to age, gender, years of service, and project role. Some of the notable observations were (based on the 0-4 scoring range):

- Gender category – 'female' and 'male' participants scored the same average score for their personal experience of leadership for all three leadership styles. Transformational

leadership (2,6) was scored the highest in all participants' personal experience, followed by transactional leadership (1,6) and laissez-faire leadership (1,0).

- Age category – participants 'under the age of 30 years old' recorded the highest score (3,33) for their personal experience of transformational leadership. The personal experience of laissez-faire leadership was rated above the importance of laissez-faire leadership by all categories in the age groupings. The '40-49 years old' age group recorded the highest variance across all score comparisons, scoring a 188% variance in the laissez-faire leadership style (1,15), followed by the 'under 30 years old' age group (100% variance; 0,33), the '30-39 years old' age group (67% variance; 1,25), and the 'above 50 years old' age group (25% variance; 0,77).
- Years of service category – personal experience of transactional leadership traits scored similarly to importance of this leadership style for the '6-10 years of service' demographic (0% variance; 1,73) and the 'more than 10 years of service' demographic (2% variance; 1,51). The personal experience of transformational leadership was rated below the importance of transformational leadership scores by all 'years of service' grouping. The '6-10 years of service' category recorded a 24% negative variance in this transformational leadership style (2,66), followed by the '0-3 years of service' group (20% negative variance; 2,49), the 'more than 10 years of service' group (11% negative variance; 3,04), and the '6-10 years of service' group (6% negative variance; 2,79).
- Project role category – The 'project controls' category scored the highest 'project role' variances for the recorded personal experience against the importance of leadership styles. A 170% positive variance in the laissez-faire leadership style (1,23) is noted for the 'project controls' demographic, followed by a 17% negative variance in the transformational leadership style (2,69), and a 11% positive variance in the transactional leadership style (1,59). The 'mechanical' demographic also showed significant variances when comparing personal experience to importance, with a 92% positive variance in the laissez-faire leadership style (1,14), a 23% negative variance in the transformational leadership style (2,44), and a 14% positive variance in the transactional leadership style (1,61.)

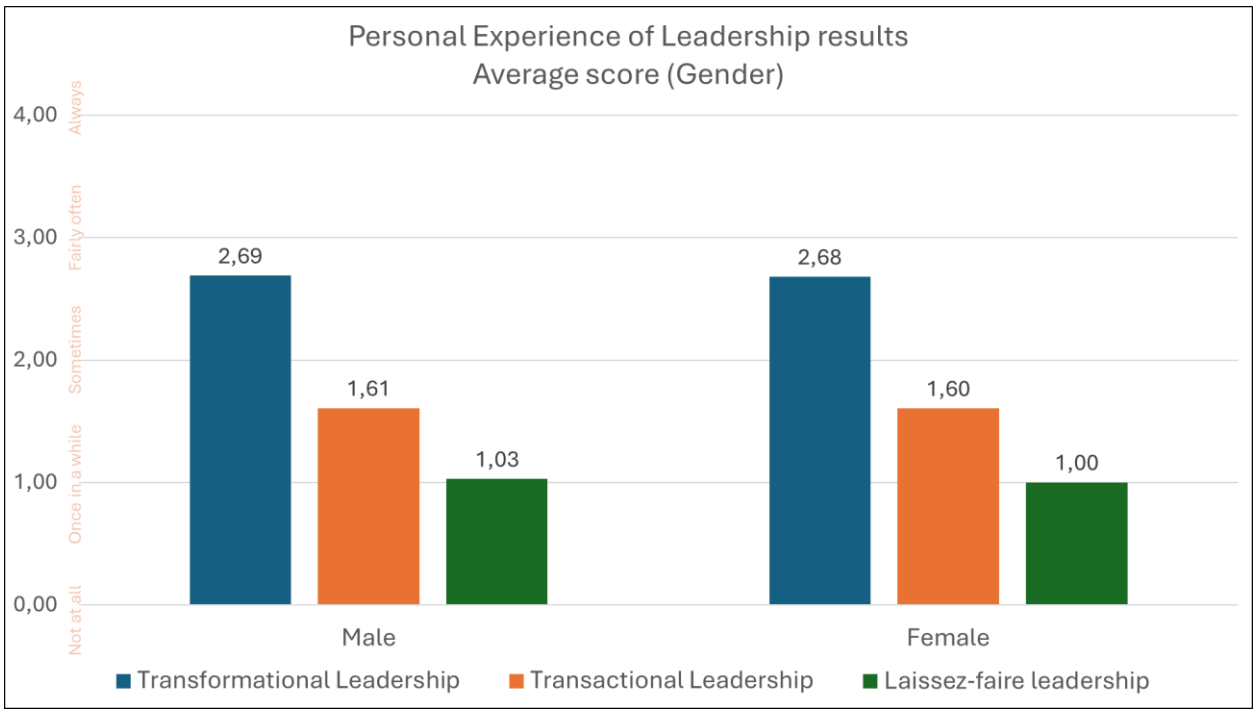


Figure 16: 'Personal Experience of Leadership' results – 'gender' category

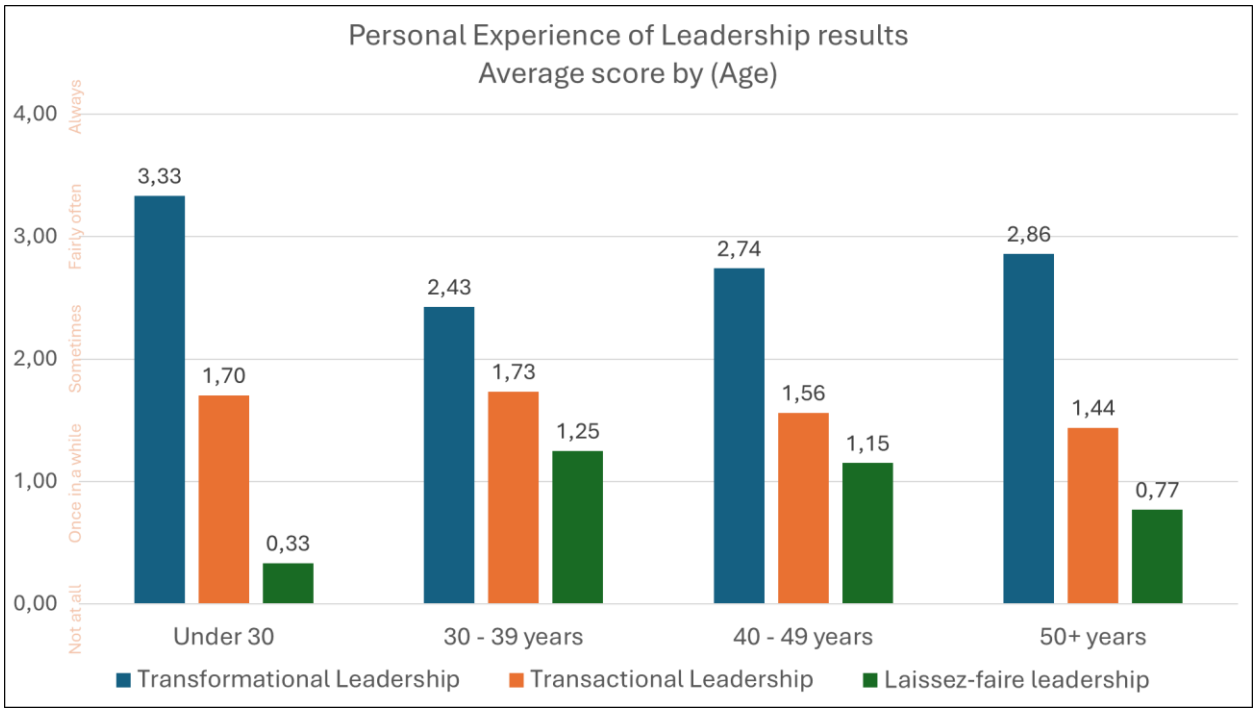


Figure 17: 'Personal Experience of Leadership' results – 'age' category

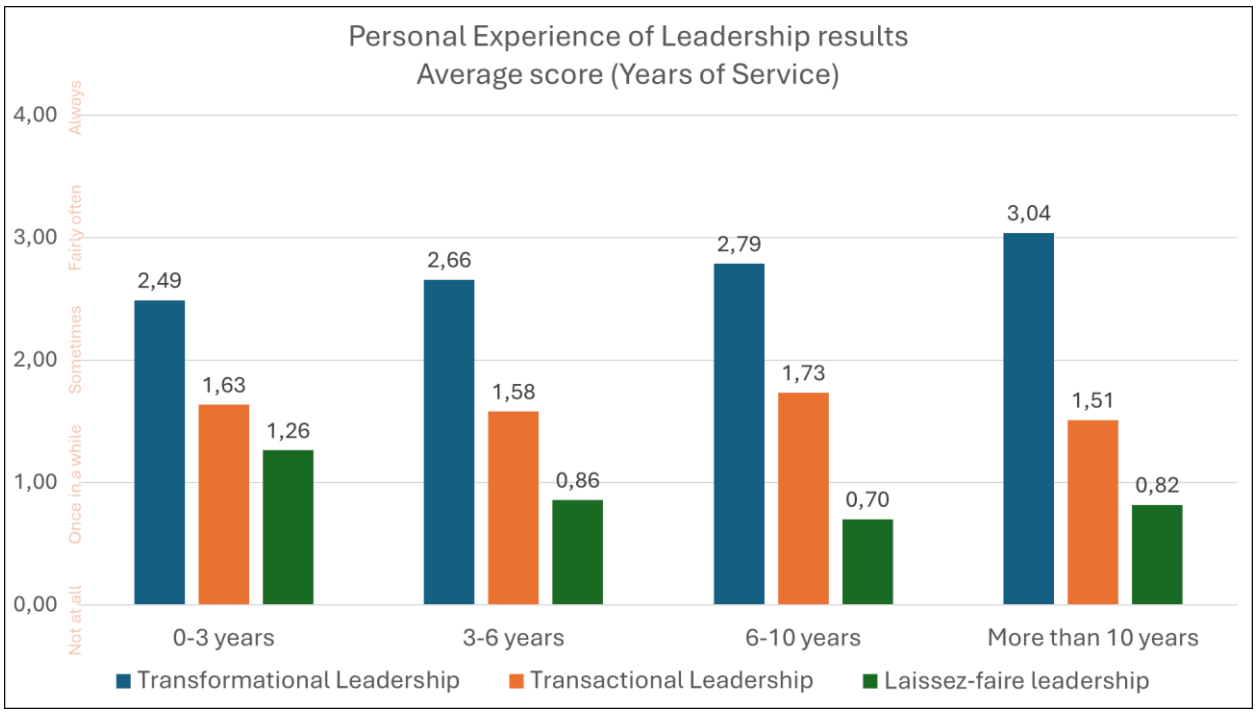


Figure 18: 'Personal Experience of Leadership' results – 'years of service' category

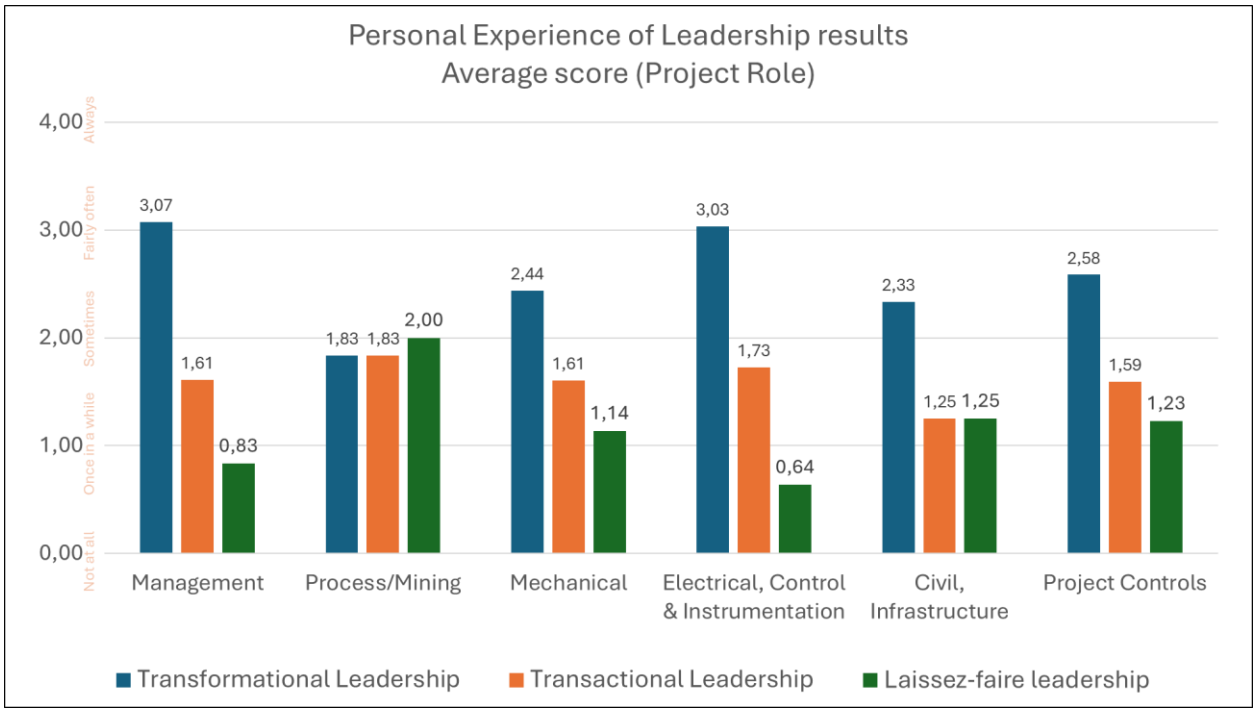


Figure 19: 'Personal Experience of Leadership' results – 'project role' category

Table 9, below, show the recorded results of section B, importance of leadership styles, and section C, personal experience of leadership styles, which have been categorized by the respective demographic groups. The variances between average scores in section B (importance) and section C (personal experience) is shown alongside the leadership styles, thus allowing for the further analysis in the next subsection.

Table 9: Importance of leadership styles (section B), and personal leadership style (section C), categorised by demographics groups

Demographic	Groups/ Categories	Transformational Leadership			Transactional Leadership			Laissez-faire leadership		
		Importance	Personal Experience	Varience	Importance	Personal Experience	Varience	Importance	Personal Experience	Varience
All Participants	Overall Average	3,24	2,69	-17%	1,50	1,61	7%	0,59	1,02	73%
Gender	Male	3,15	2,69	-15%	1,49	1,61	8%	0,64	1,03	61%
	Female	3,66	2,68	-27%	1,56	1,60	3%	0,38	1,00	167%
Age	Under 30	3,49	3,33	-4%	1,48	1,70	15%	0,17	0,33	100%
	30 - 39 years	3,02	2,43	-20%	1,61	1,73	8%	0,75	1,25	67%
	40 - 49 years	3,49	2,74	-22%	1,43	1,56	9%	0,40	1,15	188%
	50+ years	3,29	2,86	-13%	1,41	1,44	2%	0,62	0,77	25%
Years of Service	0-3 years	3,12	2,49	-20%	1,47	1,63	12%	0,74	1,26	71%
	3-6 years	3,49	2,66	-24%	1,37	1,58	15%	0,36	0,86	140%
	6-10 years	2,97	2,79	-6%	1,73	1,73	0%	0,60	0,70	17%
	More than 10 years	3,43	3,04	-11%	1,54	1,51	-2%	0,45	0,82	80%
Project Role	Management	3,15	3,07	-2%	1,73	1,61	-7%	0,67	0,83	25%
	Process/Mining	3,07	1,83	-40%	1,50	1,83	22%	1,50	2,00	33%
	Mechanical	3,16	2,44	-23%	1,41	1,61	14%	0,59	1,14	92%
	Electrical, Control & Instrumentation	3,22	3,03	-6%	1,65	1,73	5%	0,55	0,64	17%
	Civil, Infrastructure	2,93	2,33	-20%	1,15	1,25	8%	0,75	1,25	67%
	Project Controls	3,52	2,58	-27%	1,43	1,59	11%	0,45	1,23	170%

4.4 Participant Talent Retention survey – Results and Analysis

4.4.1 Talent Development & Retention – Descriptive Analysis

For Section D in the survey, participants responded to fourteen questions relating to their personal experience of leaders' behaviours towards talent management factors. The section was designed to assess the participant's experience of talent retention and employee development factors, based on the behaviours demonstrated by their leaders on the project. The average and total responses for the section D questionnaire are shown in Figure 20, below.

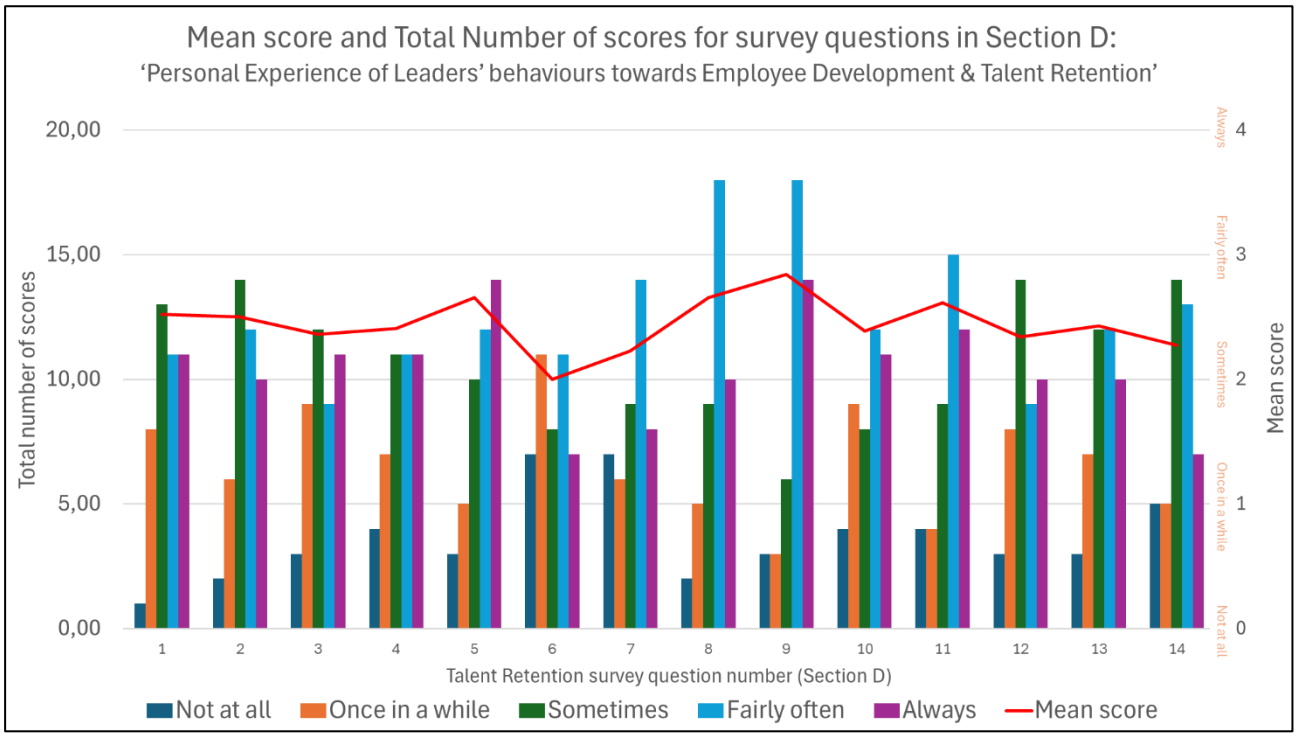


Figure 20: Mean scores – 'Personal Experience of Leaders' behaviours towards Talent Retention'

A third of the participants scored 'always' for two of section D questions and these include:

- Question 5 – 'Empowers you to take ownership of your own professional development within the project' (M = 2,66; SD = 1,24)
- Question 9 – 'Communicates the value of employees and their contributions to the project's success' (M = 2,84: SD = 1,16)

Question 8, the leaders' 'ability to create a positive and supportive working environment that encourages employees to stay' (M = 2,66; SD = 1,10), along with Question 9, received the most responses in the 'fairly often' selection, with 41% of participants scoring 'fairly often' for this behaviour. These two questions ranked as the joint highest percentage score across all section D responses.

Above normal scores were also shown for question 11, which measured leaders' behaviour that 'fosters trust and transparency, which enhances employee loyalty and commitment to the project' (M = 2,61; SD = 1,24). The highest scoring percentage for question 11, demonstrating a genuine interest in employee's professional growth and development, was 'fairly often' which accounted for 34% of its scoring.

Question 1, 'actively supports talent development' (M = 2,52; SD = 1,13), and question 2, 'fosters a culture of continuous learning and skill development' (M = 2,50; SD = 1,13), both scored their

highest percentages for the ‘sometimes’ response category. These percentages were 30% and 32% respectively, which indicates that almost a third of participants believe that their leaders’ ‘sometimes’ display these leadership behaviours. Other questions that scored highly in the ‘sometimes’ response category includes question 12, ‘influences my intention to continue working on this project in the long term’ (M = 2,34; SD = 1,22), and question 14, ‘contributes significantly to talent retention efforts’ (M = 2,27; SD = 1,21). Both question 12 and question 14 scored 32% of its responses in the ‘sometimes’ response category, however their mean scores were lower than question 1 and question 2 due to a more responses in the ‘not at all’ and ‘once in a while’ response categories.

Two questions scored more than a fifth of responses in the ‘once in a while' response category. Question 3, ‘prioritizes the growth and development of their team members’ (M = 2,36; SD = 1,26), scored 20% of its responses in ‘once in a while’, and question 6, ‘communicates the long-term vision and goals of talent development initiatives’, scored 25% in the ‘once in a while’ response category.

Question 6, ‘communicating the long-term vision and goals of talent development initiatives’ (M = 2,00; SD = 1,35), also scored the joint highest percentage score in the ‘not at all’ category (16%). This heavily contributing to its low mean score, which ranked the lowest amongst all the questions in section D. The other notable response rate for the ‘not at all’ response category was for question 7, ‘provides opportunities within your project for career advancement and professional growth’ (M = 2,23; SD = 1,34). As the joint highest ‘not at all’ response (16% along with question 6), question 7 ranks low in the mean scores amongst all questions in Section D.
Question 10, ‘demonstrates a genuine interest in the professional growth and development of employees’ (M = 2,39; SD = 1,32), along with the above-mentioned question 6 and question 7, showed the highest standard deviations. All three standard deviations scored above 1,3 which was above the average standard deviations for the section D questionnaire (average SD = 1,23). This implies these questions stand out since they show variability that is higher than the other variabilities in this section.

Table 10: Participants’ responses to personal experience of their leaders’ talent management behaviours (n = 44)

Survey Question – Section D	Mean	SD	Not at all	Once in a while	Sometimes	Fairly often	Always
1. Actively supports talent development	2,52	1,13	1	8	13	11	11
2. Fosters a culture of continuous learning and skill development	2,50	1,13	2	6	14	12	10
3. Prioritizes the growth and development of their team members	2,36	1,26	3	9	12	9	11

4. Provides constructive feedback and support to facilitate talent development	2,41	1,28	4	7	11	11	11
5. Empowers you to take ownership of your own professional development within the project	2,66	1,24	3	5	10	12	14
6. Communicates the long-term vision and goals of talent development initiatives	2,00	1,35	7	11	8	11	7
7. Provides opportunities within your project for career advancement and professional growth	2,23	1,34	7	6	9	14	8
8. Creates a positive and supportive work environment that encourages employees to stay	2,66	1,10	2	5	9	18	10
9. Communicates the value of employees and their contributions to the project's success	2,84	1,16	3	3	6	18	14
10. Demonstrates a genuine interest in the professional growth and development of employees	2,39	1,32	4	9	8	12	11
11. Fosters trust and transparency, which enhances employee loyalty and commitment to the project	2,61	1,24	4	4	9	15	12
12. Influences my intention to continue working on this project in the long term	2,34	1,22	3	8	14	9	10
13. Addresses concerns and challenges, reducing the likelihood of employee turnover	2,43	1,21	3	7	12	12	10
14. Contributes significantly to talent retention efforts	2,27	1,21	5	5	14	13	7

4.4.2 Talent retention and Demographics – Descriptive Analysis

The talent retention and development survey results were analysed by the respective demographic sections, and Figure 21, below, exhibits the respective average score per demographic.

The gender demographic scored similar average scores for this questionnaire (Male mean = 2,48; Female mean = 2,30), indicating ~~that~~ their leaders' displayed talent retention factors between 'sometimes' and 'fairly often'.

For the age demographic, participants in the ‘under 30’ category scored the highest mean value across all demographics (M = 3,10). This implies that younger employees experienced talent retention behaviours from their leaders ‘fairly often’. The other age group that falls within the millennials profile, participants between the age ’30-39 years’, showed a substantial drop from the ‘under 30’ category, as their mean score dropped towards the ‘sometimes’ rating (M = 2,22).

The ‘years of service’ demographic showed a steady rise in rating scores as participants years of service increased in the company. New employees, with ‘0-3 years’ of service, scored the lowest rating across all demographics (M = 2,20), however ratings increased for the ‘3-6 years’ category (M = 2,31) and ‘6-10 years’ category (M = 2,50). Employees with ‘more than 10 years’ of service scored favourably in their experience of talent retention factors, as the average rating settled on the ‘fairly often’ response option (M = 2,98).

The average rating score across the ’project role’ demographic ranged from M = 2,16 (civil and infrastructure participants) to M = 2,82 (management participants). The other project roles scored their experience of talent retention factors similarly, as ‘process/mining’ participants (M = 2,29), ‘mechanical’ participants (M = 2,38), ‘electrical’ participants (M = 2,54) and ‘project controls’ professionals (M = 2,33) all experienced more frequently than ‘sometimes’.



Figure 21: Talent retention and development survey results – per demographic category

4.5 Correlation Analysis – Leadership (personal experience) correlation to talent retention

4.5.1 Spearman Rank-Order Analysis – Leadership Styles

The Spearman rank-order analysis was performed to identify the correlations between each personal experience of leadership style (section C) and the talent retention and development factors (section D). The correlation coefficient is used as a descriptive measure to assess if there is any correlation between leadership styles and employee retention (Alatawi, 2017). This analysis tool has been commonly used in leadership and talent retention research studies to assess the correlations between independent and dependent variables (Alatawi, 2017; Radebe, 2018; Tiro, 2021; Casinillo & Suarez, 2022). Table 11, below, displays the Spearman's rho calculations for the three leadership styles, as computed using the Analysis Toolpak Add-ins on Microsoft Excel (Govender, 2018; Tiro, 2021).

Table 11: Spearman's rank-order correlation analysis between leadership styles (experienced) and talent retention & development

	Spearman's Analysis	**Transformational Leadership Style**	**Transactional Leadership Style**	**Laissez-faire Leadership Style**
Talent Retention & Development	Correlation, r_s	0,894**	0,288*	-0,684*
	Sig. (2-tailed)	<0,01	0,058	<0,01
	N	44	44	44

* $0.3 < r_s < 0.7$ – Medium association or practically visible correlation

** $0.7 < r_s < 1$ – Strong or large association, or practically significant correlation

Figure 22, below, show the correlation analysis of participants' ranked responses of their personal experience of the transformational leadership style versus the talent retention factors. The trendline across the ranked scatterplot demonstrates the strong positive association between transformational leadership behaviours and talent retention, thus visually representing the positive, practically significant correlation that was computed via Spearman's analysis ($r_s = 0,894$).



Figure 22: Ranked scatterplot – Transformational leadership style (experience) against talent retention

Figure 23, below, illustrates the ranked responses of participants' personal experience of transactional leadership style versus their talent retention responses. This trendline across the ranked scatterplot demonstrates the minimal or weak, positive association between transactional leadership behaviours and talent retention. As the Spearman's rho value (rs = 0,288) is drastically close to the 0.3 and 0,7 coefficient range, the relationship between transactional leadership style and talent retention can be considered a low to medium, positive association, with a practically visible positive correlation.

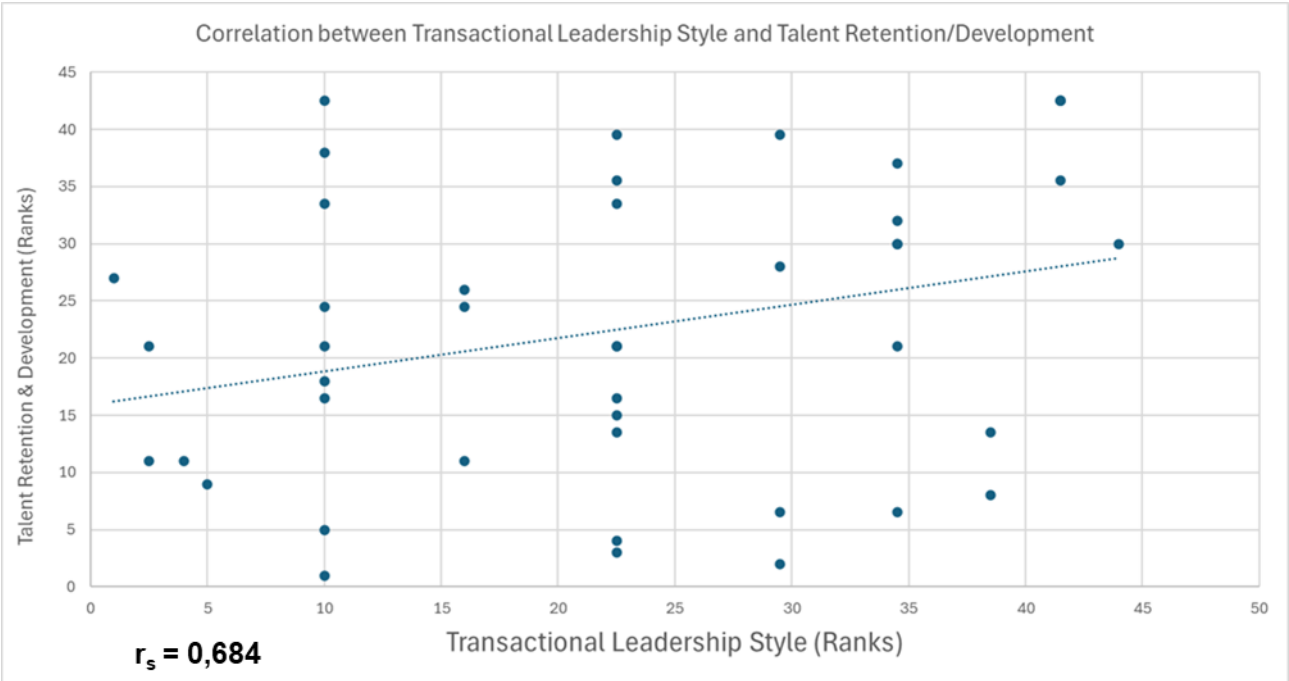


Figure 23: Ranked scatterplot – transactional leadership style (experience) against talent retention

Figure 24, below, displays the ranked responses of participants' personal experience of laissez-faire leadership behaviours against the talent retention factors. The trendline for this ranked scatterplot demonstrates the medium to strong negative association between the laisses-faire leadership style and talent retention. Spearman's rho indicates that a correlation falling between 0.3 and 0.7 range has a practically visible effect with a medium effect. However, since the computed Spearman's rho value (r_s = -0,684) is drastically close to the 0.7 and 1 coefficient range, the relationship between laissez-faire leadership style and talent retention can be considered a strong negative association, with a practically significant negative correlation.

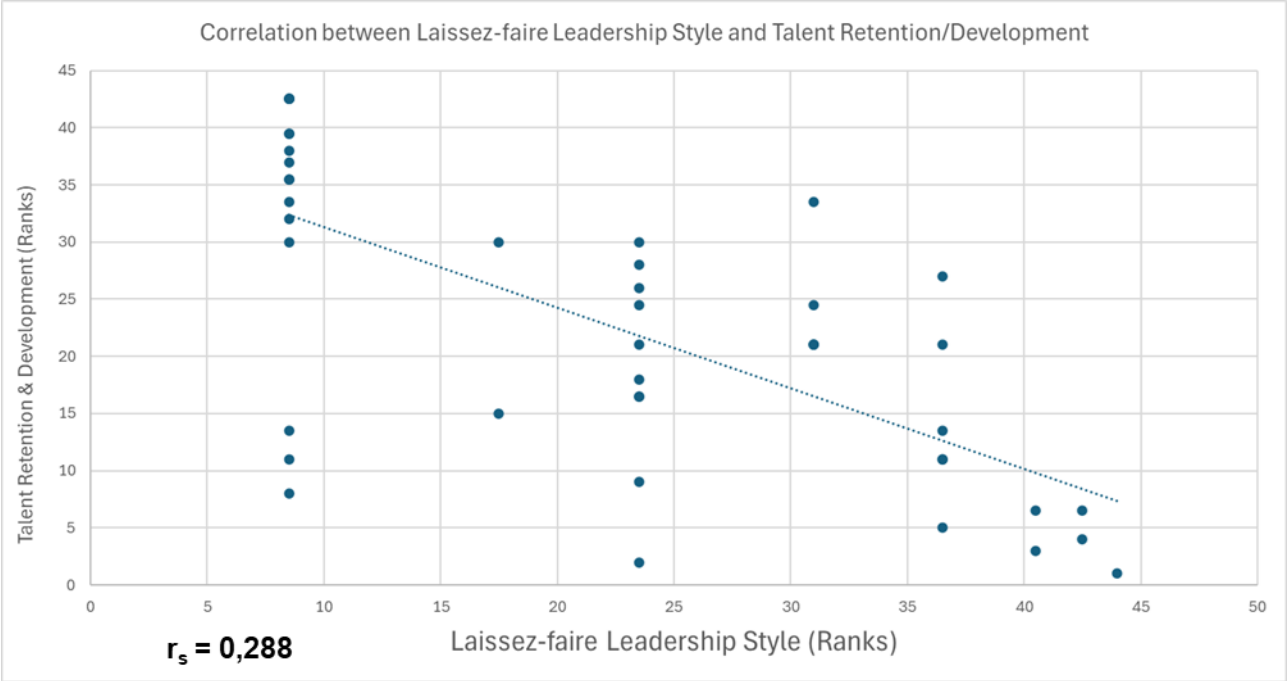


Figure 24: Ranked scatterplot – Laissez-faire leadership style (experience) against talent retention

4.5.2 Spearman Rank-Order Analysis – Leadership behaviours or factors

A further correlation analysis was performed to assess the correlations between the nine leadership factors which contribute to the three leadership styles. This correlation analysis allows for the identification of the significant contributing behaviours that influence talent retention. Table 1Table 12, below, displays the Spearman's rho calculations for the three leadership styles,

Table 12: Spearman's rank-order correlation analysis between leadership behaviours (experienced) and talent retention & development

	Talent Retention & Development		
Spearman's Analysis	**Correlation**	**Sig. (2-tailed)**	**N**
Idealised Influence (Behaviour)	0,823**	<0,01	44
Idealised Influence (Attributed)	0,856**	<0,01	44
Inspirational Motivational	0,809**	<0,01	44
Intellectual Stimulation	0,733**	<0,01	44

Individual Consideration	0,839**	<0,01	44
Contingent Reward	0,801**	<0,01	44
Management-by-exception (Active)	-0,778**	<0,01	44
Management-by-exception (Passive)	-0,337*	2,32	44
Laissez-faire	-0,684**	<0,01	44

* $0.3 < r_s < 0.7$ – Medium association or practically visible correlation

** $0.7 < r_s < 1$ – Strong or large association, or practically significant correlation

As shown in Table 12, above, all nine leadership behaviours show correlation with the talent retention results. Management-by-exception (passive) is the only leadership factor that has medium association with talent retention, with a Spearman's rho value (r_s = -0,337) between the 0.3 and 0,7 coefficient range. This association is still considered practically visible and since it is negative, it is considered as inversely correlated with talent retention with a medium effect.

The other negatively correlated factors were management-by-exception (active) and laissez-faire leadership behaviours, and both these factors have a negative, practically significant correlation with talent retention. Contingent reward is noted as being the only non-transformational leadership behaviour that is positively associated with talent retention. This behaviour has a strong, practically significant correlation with talent retention unlike the other two transactional leadership behaviours (active and passive management-by-exception), both which were noted as being negatively associated with talent retention.

All five of the transformational leadership behaviours (behavioural idealised influence, attributed idealised influence, inspirational motivational, intellectual stimulation and individual consideration) display a large, positive association with talent retention. Their Spearman's rho values range well within the practically significant correlation range ($0.7 < r_s < 1$) therefore each transformational leadership factor has a strong effect on talent retention.

4.6 Statistical Significance – Difference between Importance and Experience of Leadership

4.6.1 Mann-Whitney U test – Leadership styles

According to Mey et al (2021), "differences identified between the importance and experience ratings of the leadership behaviours" hold 'important information relative to talent retention' (Mey, Poisat, & Stindt, 2021: p5).

As shown in section 4.3.3, the importance and experience data recorded for this study was found to be usually different. Figure 25, show a visual comparison between the importance of leadership results and the personal experience of leadership results, relative to the questionnaire scale.

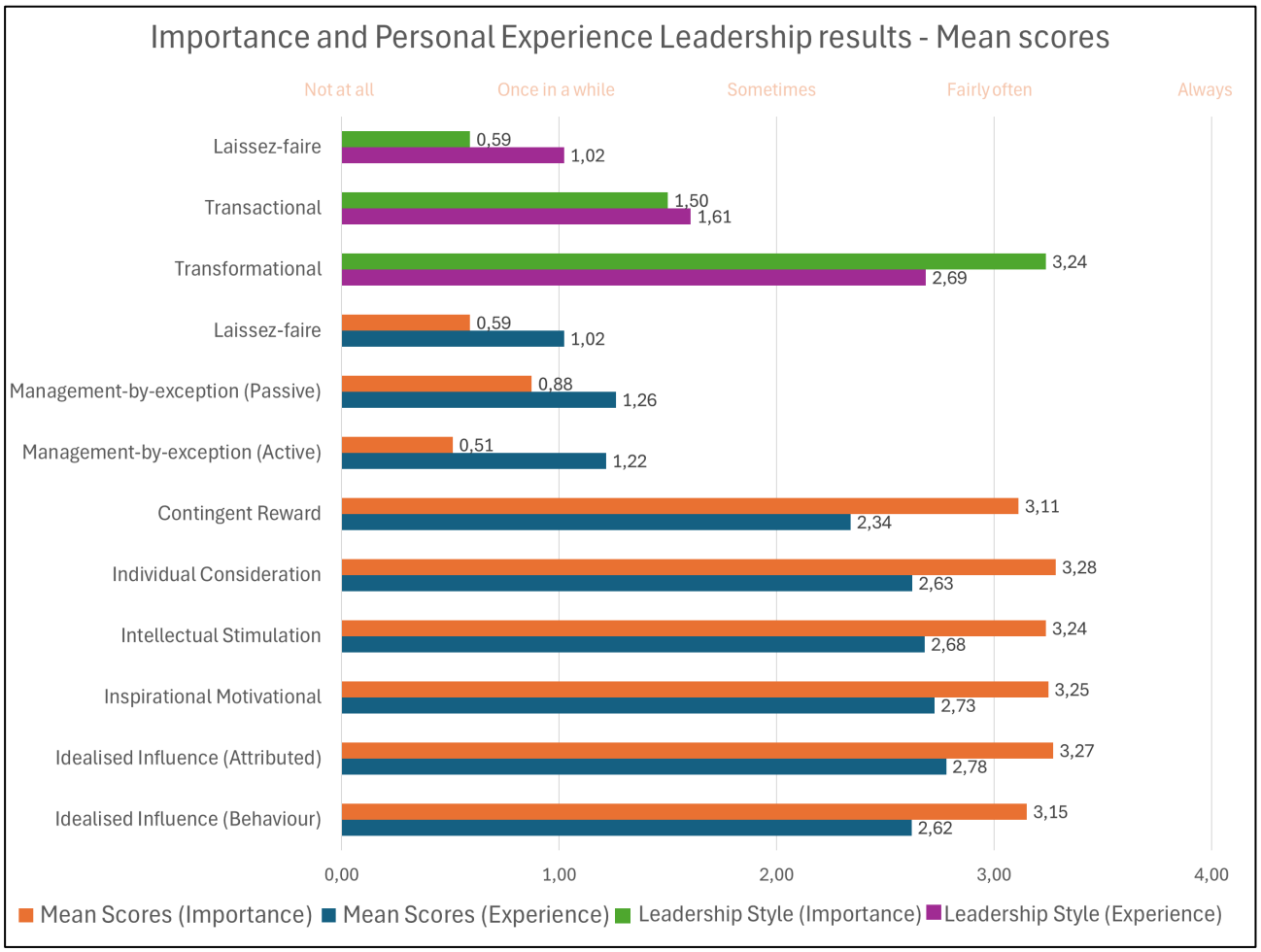


Figure 25: Mean score comparison – Importance and Personal Experience of Leadership

A summary of the differences in participant's responses to the calculated leadership styles are:

- The personal experience of transformational leadership average score (2,69) was lower than the importance of transformational leadership average score (3,24). This represented a 17% negative variance on the overall average for all participants.
- The personal experience of transactional leadership average score (1,61) was higher than the importance of transactional leadership average score (1,50). This represented a 7% positive variance on the overall average for all participants.
- The personal experience of laissez-faire leadership average score (1,02) was higher than the importance of laissez-faire leadership average score (0,59). This represented a 73% positive variance on the overall average for all participants.

To observe if the differences in leadership styles were statistically significant, a Mann-Whitney U test is performed on the importance and experience data from the leadership style variables (Mey, Poisat, & Stindt, 2021). Table 13, below, show the Mann-Whitney U test computations which were completed manually on Microsoft excel (Bobbitt, 2020; Datatab, 2025; Griffin, 2013). The results indicate the difference in importance and personal experience scores for the transactional leadership style and laissez-faire leadership style do not hold statistical significance since they are greater than the 5% significance level (sig > 0.05), while the difference in transformational leadership style do hold statistical significance (sig < 0.05).

Table 13: Mann–Whitney U test for difference between the importance and experience of leadership styles, based on average scores for section B and section C of the survey questionnaire

Leadership Styles	***U***	***Z***	***Sig.***
Transformational Leadership Style	609,50	-2,99	0,001387**
Transactional Leadership Style	1149,00	1,51	0,934542
Laissez-faire Leadership Style	1174,00	1,72	0,957205

** Sig <0.05

4.6.2 Mann-Whitney U test – Leadership behaviours

A further Mann Whitney U test was performed to identify the leadership factors or behaviours which presented statistical significance. Table 14, below, show the computations for this test. The results indicate the difference in importance and personal experience scores for the following leadership behaviours hold statistical significance.

- Idealised influence (behaviour) – sig < 0,05
- Idealised influence (attributed) – sig < 0,05
- Contingent reward – sig < 0,05.

All other leadership behaviours do not hold statistical significance as their respective sig. values were greater than the significance level of 0,05.

Table 14: Mann–Whitney U test for difference between the importance and experience of leadership behaviours, based on average scores for section B and section C of the survey questionnaire

Leadership Behaviours	***U***	***Z***	***Sig.***
Idealised Influence (Behaviour)	509,00	-3,83	0,0000639**
Idealised Influence (Attributed)	351,00	-5,15	0,0000001**
Inspirational Motivational	1774,50	6,73	1,0000000
Intellectual Stimulation	1839,50	7,27	1,0000000

Individual Consideration	1761,00	6,62	1,0000000
Contingent Reward	572,50	-3,30	0,0004824**
Management-by-exception (Active)	2817,50	15,43	1,0000000
Management-by-exception (Passive)	2722,50	14,64	1,0000000
Laissez-faire	2805,00	15,33	1,0000000

** Sig <0.05

4.7 Reliability, Validity and Variability

4.7.1 Research Reliability

According to Subramanien (2021), generalisation of a concept can produce highly excellent research if reliability and credibility is well placed in the research methods. Credibility of results was achieved by ensuring the participation sample was accurately selected to ensure they had experienced leadership and talent retention factors in the research environment of remote, copper mining projects in the DRC. To this end, the sample group purposively targeted employees who were currently involved in this working environment thus ensuring everyone is a credible source of information.

All demographics within the sample group provided response, thus ensuring a representative, generalised perspective of leadership styles and talent retention factors. This further adds credibility to this research since a holistic view can be considered of the phenomenon under research (Subramanien, 2021)

The reliability of responses to the personal experience of leadership styles and talent retention questionnaire was measured using Cronbach alpha. Measurement of internal consistency is commonly determined using Cronbach alpha, and this is particularly relevant on instruments that measure multiple items (Field, 2013). According to Tiro (2021), coefficient values above 0.7 is deemed acceptable, whilst coefficients above 0.6 can be considered satisfactory for exploratory research (Yong & Pearce, 2013; Field, 2013).

Table 15, below, show Cronbach's alpha coefficient values for the overall personal experience questionnaires for leadership styles and talent retention. Both overall scores acceptable results with their respective coefficients, as follows:

- Personal experience of leadership styles comprised of 21 items, with a Cronbach's alpha coefficient of 0.78
- Personal experience of talent retention comprised 14 items, with a Cronbach's alpha coefficient of 0.97

The Cronbach alpha was also calculated for the nine leadership factors or behaviours that allow for the assessment of the respective leadership styles. As shown in Table 15, except for management-by-exception (active) and management-by-exception (passive), all leadership behaviours scored acceptable reliability above 0.7. The management-by-exception behaviours (both active and passive) scored 0.67 and 0.61 respectively. Although these are below the satisfactory 0.7 coefficient values, these values are deemed to be within the minimum acceptance figures of 0.6 to 0.7 (Blackburn, 2020).

Table 15: Reliability of Personal Experience questionnaires (Leadership styles and Talent Retention)

		Cronbach's alpha	**Number of items**
Overall (Personal Experience of Leadership)		0,78	21
Transformational Leadership	Idealised Influence (Behaviour)	0,80	3
	Idealised Influence (Attributed)	0,85	3
	Inspirational Motivational	0,82	2
	Intellectual Stimulation	0,83	2
	Individual Consideration	0,74	2
Transactional Leadership	Contingent Reward	0,85	3
	Management-by-exception (Active)	0,67	2
	Management-by-exception (Passive)	0,61	2
Laissez-faire Leadership	Laissez-faire	0,85	2
Overall (Personal Experience of Talent Retention)		0,97	14

4.7.2 Research Validity

Data triangulation methods were used to ensure the construct and internal validity of the research results, with collected data (primary) and research literature data (secondary) being used as the two sources of information. Literature data validation was confirmed as documented in multiple, alternate research papers relating to the validity of the MLQ 5X-s questionnaire framework, which affirmed the validity of the leadership questionnaire construct as being suitable to represent the full-range model of leadership (Antonakis et al, 2003; Antonakis, 2001; Avolio & Bass, 2004; Muenjohn & Armstrong, 2008).

Furthermore, the consistency and reliability of the collected data was tested by relevant statistical methods such as the Spearman's Rank-Order Analysis and the Mann-Whitney U test. These statistical analyses provided encouraging responses which validated the data collected for the research. Utilising these two data sources, and their favourable outlook of the constructs, the research data has been validated using triangulation methods.

4.7.3 Research Variability

Table 16, below, records the variability of participants' responses to their personal experience of leadership behaviours. Contingent reward (SD = 3,34), behavioural idealised Influence (SD = 2,95) and attributed idealised influence (SD = 2,72) showed the highest variability as shown by their high standard deviation measures. This implies these three leadership factors have the most dispersed or spread-out responses across all participants.

Table 16: Variability Analysis of leaders' characteristics towards leadership behaviours, as experienced by participants

Leadership Style	Leadership Factor	Min	Max	Mean	SD
Transformational	Idealised Influence (Behaviour)	2	12	7,86	2,95
	Idealised Influence (Attributed)	0	12	8,34	2,72
	Inspirational Motivational	0	8	5,45	1,89
	Intellectual Stimulation	0	8	5,36	1,88
	Individual Consideration	0	8	5,25	2,21
Transactional	Contingent Reward	0	12	7,02	3,34
	Management-by-exception (Active)	0	6	2,43	1,74
	Management-by-exception (Passive)	0	6	2,52	1,61
Laissez-faire	Laissez-faire	0	7	2,05	1,99

Table 17, below, records the variability of participants' responses to their personal experience of talent retention questionnaire. Standard deviation ranged from 1,10 to 1,35 thus illustrating that variability was within a similar range for all talent retention responses. The highest variability (SD greater than 1,3) was recorded for question 6, question 7 and question 10 – all of which related to the leaders' behaviours towards long term growth and development facets.

Table 17: Variability Analysis of leaders' characteristics towards talent retention factors, as experienced by participants

Talent Retention and Employee development	Min	Max	Mean	SD
Overall	2	56	34,23	14,73
1. Actively supports talent development	0	4	2,52	1,13
2. Fosters a culture of continuous learning and skill development	0	4	2,50	1,13

3. Prioritizes the growth and development of their team members	0	4	2,36	1,26
4. Provides constructive feedback and support to facilitate talent development	0	4	2,41	1,28
5. Empowers you to take ownership of your own professional development within the project	0	4	2,66	1,24
6. Communicates the long-term vision and goals of talent development initiatives	0	4	2,00	1,35
7. Provides opportunities within your project for career advancement and professional growth	0	4	2,23	1,34
8. Creates a positive and supportive work environment that encourages employees to stay	0	4	2,66	1,10
9. Communicates the value of employees and their contributions to the project's success	0	4	2,84	1,16
10. Demonstrates a genuine interest in the professional growth and development of employees	0	4	2,39	1,32
11. Fosters trust and transparency, which enhances employee loyalty and commitment to the project	0	4	2,61	1,24
12. Influences my intention to continue working on this project in the long term	0	4	2,34	1,22
13. Addresses concerns and challenges, reducing the likelihood of employee turnover	0	4	2,43	1,21
14. Contributes significantly to talent retention efforts	0	4	2,27	1,21

CHAPTER 5

5. DISCUSSION

This chapter documents the details of the research findings based on the data collected from the descriptive, quantitative survey questionnaires. It provides an in-depth discussion on the initial conceptual framework that was based on the literature review and, thereafter, the research results and analysis is discussed for alignment with the research objectives.

5.1 Leadership styles influence Talent Retention – Conceptual Framework

As established in the literature review section, Chapter 2, the conceptual framework for the influence of leadership styles on talent retention in remote, copper mining projects in the DRC was recorded as follows:

- Transformational leadership style has a significant, positive influence on talent retention and development
- Transactional leadership style has a minimal, positive influence on talent retention and development
- Laissez-faire leadership style has a significant, negative influence on talent retention and development

The results of the descriptive, quantitative research are tested against the conceptual framework in the following subsections.

5.2 Importance of leadership behaviours in remote, copper mining projects in the DRC

It was revealed that six of the nine leadership factors stood out as very favourable behaviours, whilst the remaining three factors scored much lower in the importance scale. The six behaviours which scored high importance included:

- Individual consideration (M = 3,28),
- Attributed idealised influence (M = 3,27),
- Inspirational motivational (M = 3,25),
- Intellectual stimulation (M = 3,24)
- Behavioural idealised influence (M = 3,15),
- Contingent Reward (M = 3,11)

The average score of the above leadership behaviours suggest that most participants believe these factors are very important traits for leaders to have, as they believe these behaviours should be displayed ‘fairly often’, leaning towards ‘always’.

It is interesting to note that all transformational leadership factors fall within this category and constitute the top 5 mean scores in the importance survey. This strongly indicates that all participants view the transformational leadership style as significantly important in the context of their remote, copper mining project in the DRC.

Contingent reward, a transactional leadership behaviour, was the only other leadership factor upon which participant's placed high importance. This aligns with assessments made from the literature review conceptual model, as Chikove & Shiri (2021) also noted a moderate positive correlation for this transactional dimension. However, it cannot be deduced that the overall transactional leadership style is considered important to the participants, since the other two factors of this leadership style achieved low importance scores. Passive management-by-exception (M = 1,40) and active management-by-exception (M = 0,82) both scored very low average scores for the importance of these qualities. This indicates that participants consider these behaviours to be less important, as they would prefer their leaders demonstrate these behaviours 'once-in-a-while'.

Laissez-faire leadership scored similarly low importance scores, revealing that participants prefer their leaders less frequently display these characteristics.

The overall results of the importance of leadership styles supports the transformational leadership style across all its dimensions. Transactional leadership style is not considered holistically important, as only the contingent reward factor was positively rated. Management-by-exception (passive and active) and laissez-faire leadership behaviours are evidently not considered important traits for leadership within remote, copper mining projects in the DRC.

5.3 Personal Experience of leadership behaviours in remote, copper mining projects in the DRC

It was interesting to note that none of the experienced leadership behaviours directly met the importance ratings for those same factors.

The six favourable leadership behaviours from the importance section still stood out as positive in the personal experience section. However, participant's personal experience of these leadership behaviours was less than the importance they placed for these same behaviours. Conversely, the three leadership behaviours which scored low importance scores were rated marginally higher in the personal experience questionnaire. This implies that participants felt they experienced management-by-exception (passive and active) and laissez-faire leadership behaviours more frequently than they would prefer, although these were still rated lowly as being experienced 'once in a while'.

These results indicate that participants leadership expectations (importance) were misaligned with their actual experience of leadership behaviours.

The Mann-Whitney U test allowed for these differences in importance and experience to be assessed for statistical significance. Three of the nine leadership behaviours were found to have statistically significant differences (sig < 0,05), and these included idealised influence (behaviour), idealised influence (attributed) and contingent reward.

At the leadership styles level, only transformational leadership style was found to have a statistically significant difference in importance and experience ratings, which can be attributed to two of its five leaderships factors holding significance at the 5% level. Interestingly, the differences in importance and experience rating for the transactional leadership style did not hold statistical significance although contingent reward held statistical significance at the leadership factor level.

5.4 Talent Retention factors that are experienced in remote mining projects at DRA Global

A notable observation from the responses for the talent retention and development factors were all talent retention and development questions achieved an average rating that ranged between the '2' and '3' response options. Therefore, participants expressed their leaders' frequently displayed talent retention behaviours, since most individuals experience these behaviours 'sometimes' or 'fairly often'. This is an encouraging finding for the leadership teams on remote, copper mining projects in the DRC, as their teams have indicated they have felt their talent retention efforts under their existing leadership styles.

In section 4.4.2, the demographic results for the talent retention questionnaire were analysed. This analysis illustrated reassuring findings for the experience of talent retention factors as all demographic categories achieved average scores between the '2' and '3' response options. This suggests that all demographics have experienced their leaders' talent retention behaviours, without any specific demographic being isolated from their leaders.

A prominent observation from the demographic analysis is that young employees (under 30 years old) expressed frequent positive experiences in talent retention and development factors, as their average score on these behaviours was rated as above 'fairly often'. Long service employees (more than 10 years old) also conveyed a similar experience of 'fairly often' when assessing their leaders' talent retention and development behaviours. This suggests these segments of the sample population are a point of reference for leaders to further improve their talent retention behaviours across these demographics.

5.5 The influence of Leadership on Talent Retention factors

The correlation analysis performed in section 4.5 reveals intriguing results for the influence of leadership styles and behaviours on talent retention.

For the correlation of leadership styles to talent retention, the Spearman Rank-Order analysis identified the following associations:

- Practically significant, positive correlation between transformational leadership style and talent retention.
- Low to medium, practically visible, positive correlation between the transactional leadership style and talent retention.
- Practically significant, negative correlation between laissez-faire leadership style talent retention.

The correlation computations show a strong association between two of the three leadership styles (positive association for transformational and negative association for laissez-faire) and talent retention, whilst the third leadership style (transactional) holds a minimal, positive association with talent retention.

The above associations align with the conceptual framework developed in the literature review. The results show the alignment of the literature review's conceptual framework and the correlation analysis performed for this study within the context of remote, copper mining projects in the DRC.

CHAPTER 6

6. CONCLUSION AND RECOMMENDATIONS

This chapter provides an overall summary of the research conclusions based on the findings and discussion of the results, whilst including limitations of the research investigation. It provides a reflection of the research relative to the objectives of the study, which were framed to evaluate and analyse the influence of leadership styles on talent retention and employee development in remote, copper mining projects in the DRC. Furthermore, it provides a concise conclusion on the optimal leadership style for progressing talent retention and development goals in this project environment. Lastly, it documents recommendations for DRA Global's leadership training programmes to facilitate progression in their talent retentions efforts within remote, copper mining projects in the DRC.

6.1 Conclusion on the Influence of Leadership Styles on Talent Retention

The findings of this study show a conclusive relationship between the respective leadership styles (transformational, transactional and laissez-faire) and, talent retention and employee development within the context of remote, copper mining projects in the DRC. Each of the three leadership styles demonstrated an influence on talent retention and development as follows:

1. Transformational – positively influences talent retention and development, with a significant effect.
2. Transactional – positively influences talent retention and development, with a moderate effect.
3. Laissez-faire – negatively influences talent retention and development, with a significant effect.

The most influential leadership style, transformational leadership, was noted as a pivotal style in all dimensions of its behaviours. Factors such as idealised influence (behavioural and attributed), inspirational motivational, intellectual stimulation and individual consideration were consistently rated as valuable behaviours by all participants. These results indicate that employees strongly believe these transformational behaviours are integral traits for their leaders in remote, copper mining projects, and will play a key role in their own job satisfaction and subsequent commitment to the project.

Conversely, the laissez-faire leadership traits were consistently rated as behaviours which employees did not prefer. The consequent negative association with talent retention and development indicates that participants would be discouraged by non-decisive and non-supportive behaviours in the challenging remote mining project. A constant display of these passive, non-

leadership behaviours would result in increased employee turnover, due to dissatisfaction and disengagement in the workplace.

The moderate, positive association of transactional leadership with talent retention was significantly influenced by the contingent reward behaviour trait. This factor was a popular transformational behaviour amongst all participants, which suggests that employees strongly favour a structured approach to performance, rewards and employee recognition. However, in the remote mining project environment, a proactive approach to transformational leadership is preferred since employees strongly discouraged management-by-exception traits (active and passive). This suggests that project leaders who avoid corrective management, whilst displaying a structured reward approach, will gain the moderate, positive influence on employee commitment.

6.2 Conclusion on Optimal Leadership Style for progressing Talent Retention goals

The conclusions in this study, relating to the influence of leadership styles on talent retention, aligns with existing research literature relating to leadership styles, in alternate working environments. This alignment with existing leadership research further reinforces the conclusions of this research.
Based on the above, it is concluded that leaders in remote, copper mining projects in the DRC should heavily depend on all transformational leadership behaviours to enhance talent retention efforts. These transformational leadership traits will foster employee motivation and engagement, thus driving long-term commitment to the project. Furthermore, transactional leadership traits associated with rewards frameworks and clarification of expectations are also essential behaviours to maintain employee motivation and job satisfaction. Therefore, leaders must consistently demonstrate these behaviours to ensure employees are committed to the challenging remote, mining projects environment.

A combination of the transformational leadership style and a proactive transactional leadership style is considered the optimal leadership style in the remote, copper mining projects in the DRC.

6.3 Recommendations for DRA Global's Leadership Styles for remote mining projects

The personal experience of leadership styles at DRA Global, as discussed in section 5.3, demonstrated the average participant experienced all transformational behaviours and the contingent reward transactional behaviour more frequently than the other leadership traits.
This indicates that current leadership styles experienced by DRA employees in remote, copper mining projects in the DRC align with the optimal leadership style conclusions. DRA Global's management can be encouraged to observe that existing leaders are commonly demonstrating behaviours that are having a positive influence on talent retention and employment development.
However, in all cases, the personal experience ratings did not align with employees' ratings for the importance of those behaviours. The differences between importance and experience provides a

significant opportunity for DRA Global to further improve their talent retention and employee development efforts.

To close this gap and further enhance talent retention and employee development efforts, it is recommended that DRA Global prioritise leadership training programs that focus on idealised influence leadership factors (behaviour and attributed) and contingent reward leadership traits. These behaviours were shown to have statistical significance in the research findings; therefore, leadership training programmes should be centred on these traits.
Furthermore, from the demographic analysis, project leaders should place emphasis on these influential behaviours within the following demographics:

- Age demographic – ’30-39 years old’,
- Years of service demographic – ‘0-3 years’,
- Project role demographic – ‘Civil and Infrastructure’ and ‘Process/Mining’.

These segments of the workforce expressed greater differences in personal experience and importance of leadership, whilst also displaying marginally lower talent retention ratings.

DRA Global will yield the most value from implementing bespoke leadership development education that initially targets the above-mentioned leadership traits and demographics.

6.4 Recommendations for further research

The following recommendations are made to further this research within the context of remote, copper mining projects in the DRC:

- Extend the sample population to other professionals who have experience in this environment – The sample population for this study was based on the existing DRA Global project team, who are currently working on a remote, copper mining project in the DRC. The research could extend the sample population to all DRA Global employees who have historically worked on remote, copper mining projects in the DRC, and this would include employees across the different regions within the DRA Global international offices in Australia and Canada. A larger sample population would allow further insight into the influence of leadership styles on talent retention within this project environment.
- Utilise qualitative research methods to assess the influence of leadership styles on talent retention – a qualitative approach would allow for respondents to be more open and transparent regarding their experience of leadership behaviours and styles (Wilcher, 2019). This allows for future research to collect additional information relating to the influence of

leadership styles on talent retention, with participants elaborating on their experience of specific leadership behaviours or factors.

- Perform longitudinal research on the same population over an extended period – According to Kalish and Luria (2021), it is not clear whether the results of a short-lived, temporary group study (this research may be considered as such) are applicable to longer-term leadership influence. Longitudinal studies are more suited to develop leadership scholarship hence it is recommended this research be extended toward a longitudinal study (Kalish & Luria, 2021). Furthermore, leadership influence on talent retention can be observed and measured over time thus providing more confidence in the direct associations between the variables, as opposed to influence from external factors such as economics and industry variables.

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APPENDIX A1 – ETHICS CLEARANCE

WITS UNIVERSITY

Rajesan Govender <2783475@students.wits.ac.za>

Your ethics clearance number

1 message

Bruno Emwanu <Bruno.Emwanu@wits.ac.za> 22 October 2024 at 11:51
To: Rajesan Govender <2783475@students.wits.ac.za>
Cc: Lorrainne Doherty <Lorrainne.Doherty@wits.ac.za>

Dear Rajesan,

I am pleased to inform you that the School Ethics Committee completed assessing your ethics application for your MSc 50/50 research titled: "An examination of the impact of leadership style on DRA Global's talent retention and employee development in remote copper mining projects in the Democratic Republic of the Congo (DRC) " and it has been ratified by the University Main Ethics Committee (non-medical). Your ethics clearance number is MIAEC 138/24.

Please use your ethics clearance number as a reference for all future correspondence on this matter.

By copy of this email, your supervisor is also informed.

Regards,
Dr. Emwanu

APPENDIX A2 – DRA GLOBAL PERMISSION LETTER

// DRA Projects (PTY) LTD
Building 33, Woodlands Office Park, 20 Woodlands Drive, Woodlands, Sandton, 2080 / South Africa
PO Box 3567, Rivonia, Gauteng, 2128 / South Africa
T + 27 11 202 8600 / E info@draglobal.com / W draglobal.com

2024/09/26

Rajesan Govender
DRA Global
Building 33 Woodlands Office Park
20 Woodlands Drive Woodlands
Sandton
2080

Dear Rajesan,

RE: PERMISSION TO CONDUCT RESEARCH AT DRA GLOBAL

DRA Global (DRA) acknowledges receipt of your letter for permission to use company data in your research, titled "An examination of the impact of leadership style on DRA Global's talent retention and employee development in remote copper mining projects in the Democratic Republic of the Congo (DRC)".

DRA is supportive of this research provided you do not use any Intellectual Property or internal information to complete your research. All data and documentation used should be accessible to the public and if not, permission will be required from DRA and the client.

DRA employees, that participate in your research, shall be provide consent to and their personal information shall remain anonymous and confidential. Participants shall be reassured that they can withdraw their permission at any time, and they should not be advantaged or disadvantaged in any way.

All research data and findings shall be approved by DRA management prior to issuing the research paper to any public forum.

Yours sincerely,

Louise Dercksen
Louise Dercksen (Sep 30, 2024 20:30 GMT+2)

Louise Dercksen
Head of People & Culture - EMEA & AMER
Louise.Dercksen@draglobal.com
+27 11 202 8990

APPENDIX B – PARTICIPANT INFORMATION SHEET

27 September 2024

Dear Participant,

Re: Participation in Research on the Impact of Leadership Styles on DRA's Talent Retention and Employee Development in Remote Copper Mining Projects in the Democratic Republic of the Congo

Thank you for offering to participate in online survey questionnaires regarding the above research.

I am a part-time MSc student in the School of Mechanical, Industrial and Aeronautical Engineering at the University of the Witwatersrand, under the supervision of Dr Lorraine Doherty.

My MSc title is: *An examination of the impact of leadership style on DRA's talent retention & employee development in remote copper mining projects in the Democratic Republic of the Congo (DRC)*

Motivation for the research

The geographic location of remote copper mining projects results in communication gaps and logistics constraints, as well as quality and time limitations. Furthermore, it can create instability and personal stress due to challenging on-site conditions and rigorous travel, as well as family and fatigue issues. These project circumstances result in significant work stresses, increasing the likelihood of burnout and a lack of work-life balance. These factors impact on talent retention and employee development.

For this research, I would like to understand how leadership styles influence employee retention and development in remote copper mining projects in the DRC. The motivation for this study is to identify the optimal leadership style for progressing talent retention and development goals in remote projects.

Invitation to participate in research

I would like to formally invite you to participate in this study. As an expert who works, or has worked, in remote mining projects in the DRC, your knowledge and experience would contribute significantly.

The study will be conducted between Oct-Nov 2024. Involvement in the study would entail completing an online Likert-scale questionnaire, developed to document your perspective and experience with leadership styles in your remote mining project. The questionnaire can be taken at your convenience.

Participation is voluntary, and you may withdraw at any time. Anonymity (regarding employee names) and confidentiality of information will be assured and respected. Your consent will be requested prior to completing the questionnaire, and if you do not wish to participate in the study, this will be respected.

The results of the study will form part of my MSc dissertation report, and may also be reported in academic papers and at conferences. A summary of the results of the research will be made available to you on request.

Please contact me if you have any questions regarding the research and participation in the study.

I look forward to hearing from you.

Yours faithfully

Rajesan Govender

University of the Witwatersrand
Johannesburg, South Africa
Private Bag 3, WITS 2050, South Africa
Tel: +27 11- 717- 737

Supervisor: Dr Lorraine Doherty

Email address Lorrainne.Doherty@wits.ac.za

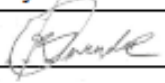
APPENDIX C – LETTER OF CONSENT

Dear Participant,

Thank you for accepting to participate in this study. Please complete this consent form as you see appropriate. By signing this consent form, you are indicating that you have read and understood the description of this study and that you agree to the terms as described below:

	Mark with X	
	YES	NO
I confirm that I have read and understood the information about this study as provided in the participant's information sheet.		
I understand that my participation is voluntary and that I am free to withdraw at any time without any penalties or negative consequences against me.		
I grant permission for the interview to be audio recorded.		
I agree that the information I provide may be treated as strictly confidential and anonymous and only the research team will have access to the interview data.		
I understand that the information acquired from the interview will not be recorded in excess of what is required for this study.		
I agree that the results of this study may be recorded in academic journals and at conferences.		
I have had the opportunity to ask any questions related to this study and I have had all my questions answered to my satisfaction.		
I may request a report summary, which will come as a result of this study.		

With full knowledge of all above-mentioned terms, I agree to participate in this study.

Participant		Consent taken by (Researcher)	
Name		Name	Rajesan Govender
Signature		Signature	
Date		Date	27 September 2024

APPENDIX D – SURVEY QUESTIONNAIRE

Section A – Demographics

A	Tell us ABOUT YOU?						
1	Indicate your Gender	Male			Female		
2	Indicate your Age Group	Under 30		30 - 39 years	40 - 49 years		50+ years
3	Indicate your Length of Service at DRA Global	0-3 years		3-6 years	6-10 years		More than 10 years
4	What is your role within the project team	Management	Project Controls	Mechanical	Civil, Infrastructure	Process/Mining	Electrical, Control & Instrumentation

Section B – Importance of Leadership Styles

B	Think about your ideal Leadership behaviours on remote mining projects. Is the below IMPORTANT TO YOU?	Not at all	Once in a while	Sometimes	Fairly often	Always
1	Provides me with assistance in exchange for my efforts					
2	Re-examines critical assumptions to questions when they are appropriate					
3	Fails to interfere until problems become serious					
4	Focuses attention on mistakes and deviations from standards					
5	Avoids getting involved when important issues arise					
6	Talks about his/her most important values and beliefs					
7	Is absent when needed					
8	Seeks differing perspectives when solving problems					
9	Talks optimistically about the future					
10	Instils pride in me for being associated with him/her					
11	Is specific about who is responsible for reaching performance targets					
12	Waits for things to go wrong before taking action					
13	Talks enthusiastically about what needs to be accomplished					
14	Stresses the importance of having a strong sense of purpose					
15	Spends time teaching and coaching					
16	Makes clear what one can expect to receive when performance goals are achieved					
17	Goes beyond self-interest for the group					
18	Treats me as an individual rather than just a member of the group					
19	Demonstrates that problems must reoccur before taking action					
20	Acts in ways that builds my respect for him/her					
21	Considers the moral and ethical consequences of decisions					

Section C – Experience of Leadership Styles

C	Think about your personal PROJECT EXPERIENCE on remote copper mining projects in the DRC. Did your Leadership team display these behaviours?	Not at all	Once in a while	Sometimes	Fairly often	Always
1	Provides me with assistance in exchange for my efforts					
2	Re-examines critical assumptions to questions when they are appropriate					
3	Fails to interfere until problems become serious					
4	Focuses attention on mistakes and deviations from standards					
5	Avoids getting involved when important issues arise					
6	Talks about his/her most important values and beliefs					
7	Is absent when needed					
8	Seeks differing perspectives when solving problems					
9	Talks optimistically about the future					
10	Instils pride in me for being associated with him/her					
11	Is specific about who is responsible for reaching performance targets					
12	Waits for things to go wrong before taking action					
13	Talks enthusiastically about what needs to be accomplished					
14	Stresses the importance of having a strong sense of purpose					
15	Spends time teaching and coaching					
16	Makes clear what one can expect to receive when performance goals are achieved					
17	Goes beyond self-interest for the group					
18	Treats me as an individual rather than just a member of the group					
19	Demonstrates that problems must reoccur before taking action					
20	Acts in ways that builds my respect for him/her					
21	Considers the moral and ethical consequences of decisions					

Section D – Experience of Talent Retention and Development factors

D	Think about your personal PROJECT EXPERIENCE on remote copper mining projects in the DRC. Did your Leadership display these behaviours relating to talent management factors?	Not at all	Once in a while	Sometimes	Fairly often	Always
1	Actively supports talent development					
2	Fosters a culture of continuous learning and skill development					
3	Prioritizes the growth and development of their team members					
4	Provides constructive feedback and support to facilitate talent development					
5	Empowers you to take ownership of your own professional development within the project					
6	Communicates the long-term vision and goals of talent development initiatives					
7	Provides opportunities within your project for career advancement and professional growth					
8	Creates a positive and supportive work environment that encourages employees to stay					
9	Communicates the value of employees and their contributions to the project's success					
10	Demonstrates a genuine interest in the professional growth and development of employees					
11	Fosters trust and transparency, which enhances employee loyalty and commitment to the project					
12	Influences my intention to continue working on this project in the long term					
13	Addresses concerns and challenges, reducing the likelihood of employee turnover					
14	Contributes significantly to talent retention efforts					

APPENDIX E – PARTICIPANT RESPONSES TO QUESTIONNAIRE

Section A – Consent and Demographics raw data

Timestamp	Email address	Please complete this consent form as you see appropriate [I confirm that I have read and understood the information about this study as provided in the participant's information sheet]	Please complete this consent form as you see appropriate [I agree that the information I provide may be treated as strictly confidential and anonymous and only the research team will have access to the data.]	Please complete this consent form as you see appropriate [I agree that the results of this study may be recorded in academic journals and at conferences]	Please complete this consent form as you see appropriate [I have had the opportunity to ask any questions related to this study and I have had all my questions answered to my satisfaction.]	Please complete this consent form as you see appropriate [I may request a report summary, which will come as a result of this study.]	Please complete this consent form as you see appropriate [I understand that my participation is voluntary and that I am free to withdraw at any time without any penalties or negative conseqences against me]
10/17/2024 12:36:56	1	Yes	Yes	Yes	Yes	Yes	Yes
10/18/2024 13:26:34	2	Yes	Yes	Yes	Yes	Yes	Yes
10/18/2024 13:53:07	3	Yes	Yes	Yes	Yes	Yes	Yes
10/19/2024 7:43:39	4	Yes	Yes	Yes	Yes	Yes	Yes
10/20/2024 18:59:40	5	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 6:55:40	6	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 7:06:45	7	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 8:15:02	8	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 8:20:44	9	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 8:31:25	10	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 8:32:44	11	Yes	Yes	Yes	Yes	No	Yes
10/21/2024 12:33:11	12	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 13:15:41	13	Yes	Yes	Yes	Yes	Yes	Yes
10/21/2024 16:21:23	14	Yes	Yes	Yes	Yes	Yes	Yes
10/22/2024 5:35:10	15	Yes	Yes	Yes	Yes	Yes	Yes
10/22/2024 6:08:18	16	Yes	Yes	Yes	Yes	Yes	Yes
10/22/2024 10:35:39	17	Yes	Yes	Yes	Yes	Yes	Yes
10/28/2024 7:13:19	18	Yes	Yes	Yes	Yes	Yes	Yes
10/29/2024 8:55:07	19	Yes	Yes	Yes	Yes	Yes	Yes
10/31/2024 10:06:56	20	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 7:05:29	21	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 7:36:05	22	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 7:53:27	23	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 9:13:21	24	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 9:17:13	25	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 9:24:13	26	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 10:15:10	27	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 11:47:20	28	Yes	Yes	Yes	Yes	Yes	Yes
11/5/2024 12:09:45	29	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 8:08:13	30	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 8:16:19	31	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 8:20:03	32	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 8:26:37	33	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 8:56:51	34	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 10:22:38	35	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 10:48:14	36	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 11:09:50	37	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 12:20:19	38	Yes	Yes	Yes	Yes	Yes	Yes
11/7/2024 12:36:57	39	Yes	Yes	Yes	Yes	Yes	Yes
11/9/2024 13:39:20	40	Yes	Yes	Yes	Yes	Yes	Yes
11/11/2024 8:42:31	41	Yes	Yes	Yes	Yes	Yes	Yes
11/11/2024 10:34:28	42	Yes	Yes	Yes	Yes	Yes	Yes
11/11/2024 19:03:52	43	Yes	Yes	Yes	Yes	Yes	Yes
11/12/2024 12:16:05	44	Yes	Yes	Yes	Yes	Yes	Yes

Timestamp	Email address	Indicate your Gender	Indicate your Age Group	Indicate your Length of Service at DRA Global	What is your role within the project team?
10/17/2024 12:36:56	1	Male	30 - 39 years	6-10 years	Management
10/18/2024 13:26:34	2	Male	50+ years	0-3 years	Process/Mining
10/18/2024 13:53:07	3	Female	40 - 49 years	More than 10 years	Electrical, Control & Instrumentation
10/19/2024 7:43:39	4	Male	30 - 39 years	3-6 years	Mechanical
10/20/2024 18:59:40	5	Male	40 - 49 years	0-3 years	Electrical, Control & Instrumentation
10/21/2024 6:55:40	6	Male	30 - 39 years	6-10 years	Mechanical
10/21/2024 7:06:45	7	Male	30 - 39 years	0-3 years	Mechanical
10/21/2024 8:15:02	8	Male	50+ years	3-6 years	Management
10/21/2024 8:20:44	9	Male	50+ years	3-6 years	Mechanical
10/21/2024 8:31:25	10	Male	40 - 49 years	More than 10 years	Civil, Infrastructure
10/21/2024 8:32:44	11	Male	40 - 49 years	0-3 years	Project Controls
10/21/2024 12:33:11	12	Male	30 - 39 years	0-3 years	Electrical, Control & Instrumentation
10/21/2024 13:15:41	13	Male	30 - 39 years	0-3 years	Civil, Infrastructure
10/21/2024 16:21:23	14	Male	30 - 39 years	0-3 years	Mechanical
10/22/2024 5:35:10	15	Male	30 - 39 years	0-3 years	Electrical, Control & Instrumentation
10/22/2024 6:08:18	16	Male	40 - 49 years	More than 10 years	Management
10/22/2024 10:35:39	17	Male	30 - 39 years	6-10 years	Electrical, Control & Instrumentation
10/28/2024 7:13:19	18	Male	30 - 39 years	3-6 years	Civil, Infrastructure
10/29/2024 8:55:07	19	Male	Under 30	0-3 years	Mechanical
10/31/2024 10:06:56	20	Male	30 - 39 years	0-3 years	Mechanical
11/5/2024 7:05:29	21	Female	40 - 49 years	3-6 years	Project Controls
11/5/2024 7:36:05	22	Female	50+ years	More than 10 years	Project Controls
11/5/2024 7:53:27	23	Male	30 - 39 years	More than 10 years	Project Controls
11/5/2024 9:13:21	24	Female	Under 30	0-3 years	Project Controls
11/5/2024 9:17:13	25	Male	50+ years	More than 10 years	Management
11/5/2024 9:24:13	26	Female	40 - 49 years	0-3 years	Project Controls
11/5/2024 10:15:10	27	Male	50+ years	0-3 years	Project Controls
11/5/2024 11:47:20	28	Male	50+ years	More than 10 years	Project Controls
11/5/2024 12:09:45	29	Female	30 - 39 years	0-3 years	Project Controls
11/7/2024 8:08:13	30	Male	30 - 39 years	0-3 years	Mechanical
11/7/2024 8:16:19	31	Male	30 - 39 years	0-3 years	Mechanical
11/7/2024 8:20:03	32	Male	50+ years	More than 10 years	Civil, Infrastructure
11/7/2024 8:26:37	33	Male	30 - 39 years	0-3 years	Mechanical
11/7/2024 8:56:51	34	Male	Under 30	0-3 years	Management
11/7/2024 10:22:38	35	Male	50+ years	6-10 years	Electrical, Control & Instrumentation
11/7/2024 10:48:14	36	Male	30 - 39 years	More than 10 years	Electrical, Control & Instrumentation
11/7/2024 11:09:50	37	Male	40 - 49 years	More than 10 years	Electrical, Control & Instrumentation
11/7/2024 12:20:19	38	Male	50+ years	3-6 years	Mechanical
11/7/2024 12:36:57	39	Male	50+ years	0-3 years	Electrical, Control & Instrumentation
11/9/2024 13:39:20	40	Female	50+ years	3-6 years	Project Controls
11/11/2024 8:42:31	41	Male	30 - 39 years	0-3 years	Electrical, Control & Instrumentation
11/11/2024 10:34:28	42	Male	40 - 49 years	6-10 years	Management
11/11/2024 19:03:52	43	Female	40 - 49 years	More than 10 years	Project Controls
11/12/2024 12:16:05	44	Male	50+ years	0-3 years	Electrical, Control & Instrumentation

Section B – Importance of Leadership Styles raw data

Timestamp	Email address	My ideal leader; [Provides me with assistance in exchange for my efforts]	My ideal leader; [Re-examines critical assumptions to questions when they are appropriate]	My ideal leader; [Recognises problems and takes action before they become serious]	My ideal leader; [Pays attention when work deviates from standards or mistakes are made.]	My ideal leader; [Always gets involved when important issues arise]	My ideal leader; [Talks about his/her most important values and beliefs]	My ideal leader; [Is always there when needed]
10/17/2024 12:36:56	1	Sometimes	Sometimes	Once in a while	Once in a while	Sometimes	Sometimes	Sometimes
10/18/2024 13:26:34	2	Sometimes	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes	Sometimes
10/18/2024 13:53:07	3	Always	Always	Always	Always	Always	Always	Always
10/19/2024 7:43:39	4	Always	Fairly often	Always	Always	Always	Always	Always
10/20/2024 18:59:40	5	Fairly often	Always	Fairly often	Always	Always	Sometimes	Fairly often
10/21/2024 6:55:40	6	Fairly often	Fairly often	Fairly often	Fairly often	Always	Sometimes	Always
10/21/2024 7:06:45	7	Sometimes	Fairly often	Always	Fairly often	Always	Once in a while	Once in a while
10/21/2024 8:15:02	8	Always	Fairly often	Always	Always	Always	Fairly often	Fairly often
10/21/2024 8:20:44	9	Sometimes	Fairly often	Fairly often	Fairly often	Always	Sometimes	Always
10/21/2024 8:31:25	10	Once in a while	Sometimes	Always	Always	Always	Once in a while	Always
10/21/2024 8:32:44	11	Always	Always	Always	Always	Always	Always	Always
10/21/2024 12:33:11	12	Always	Fairly often	Always	Always	Always	Sometimes	Fairly often
10/21/2024 13:15:41	13	Once in a while	Fairly often	Always	Always	Always	Sometimes	Fairly often
10/21/2024 16:21:23	14	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
10/22/2024 5:35:10	15	Fairly often	Fairly often	Always	Always	Always	Once in a while	Fairly often
10/22/2024 6:08:18	16	Fairly often	Always	Fairly often	Always	Always	Fairly often	Fairly often
10/22/2024 10:35:39	17	Fairly often	Fairly often	Sometimes	Sometimes	Fairly often	Sometimes	Always
10/28/2024 7:13:19	18	Fairly often	Sometimes	Fairly often	Fairly often	Fairly often	Sometimes	Fairly often
10/29/2024 8:55:07	19	Fairly often	Always	Always	Fairly often	Always	Always	Always
10/31/2024 10:06:56	20	Always	Always	Always	Fairly often	Always	Fairly often	Always
11/5/2024 7:05:29	21	Not at all	Always	Always	Always	Always	Fairly often	Always
11/5/2024 7:36:05	22	Always	Always	Always	Always	Always	Always	Always
11/5/2024 7:53:27	23	Fairly often	Fairly often	Fairly often	Always	Fairly often	Sometimes	Sometimes
11/5/2024 9:13:21	24	Once in a while	Always	Always	Always	Always	Fairly often	Fairly often
11/5/2024 9:17:13	25	Always	Fairly often	Fairly often	Always	Always	Always	Fairly often
11/5/2024 9:24:13	26	Sometimes	Fairly often	Fairly often	Always	Sometimes	Once in a while	Fairly often
11/5/2024 10:15:10	27	Fairly often	Fairly often	Always	Always	Always	Sometimes	Fairly often
11/5/2024 11:47:20	28	Fairly often	Fairly often	Always	Fairly often	Always	Sometimes	Always
11/5/2024 12:09:45	29	Always	Fairly often	Always	Fairly often	Always	Fairly often	Always
11/7/2024 8:08:13	30	Sometimes	Always	Always	Always	Fairly often	Once in a while	Fairly often
11/7/2024 8:16:19	31	Always	Once in a while	Always	Always	Once in a while	Fairly often	Always
11/7/2024 8:20:03	32	Once in a while	Sometimes	Always	Always	Fairly often	Sometimes	Sometimes
11/7/2024 8:26:37	33	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
11/7/2024 8:56:51	34	Always	Always	Always	Always	Always	Always	Always
11/7/2024 10:22:38	35	Always	Sometimes	Always	Always	Always	Always	Always
11/7/2024 10:48:14	36	Fairly often	Fairly often	Fairly often	Always	Always	Fairly often	Always
11/7/2024 11:09:50	37	Fairly often	Fairly often	Always	Fairly often	Always	Sometimes	Fairly often
11/7/2024 12:20:19	38	Once in a while	Fairly often	Always	Always	Always	Sometimes	Fairly often
11/7/2024 12:36:57	39	Once in a while	Fairly often	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
11/9/2024 13:39:20	40	Always	Always	Always	Always	Fairly often	Fairly often	Always
11/11/2024 8:42:31	41	Fairly often	Fairly often	Sometimes	Fairly often	Fairly often	Sometimes	Fairly often
11/11/2024 10:34:28	42	Sometimes	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes	Always
11/11/2024 19:03:52	43	Fairly often	Always	Always	Fairly often	Fairly often	Fairly often	Always
11/12/2024 12:16:05	44	Sometimes	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes	Always

My ideal leader; [Seeks differing perspectives when solving problems]	My ideal leader; [Talks optimistically about the future]	My ideal leader; [Instills pride in me for being associated with him/her]	My ideal leader; [Is specific about who is responsible for reaching performance targets]	My ideal leader; [Takes action before things go wrong]	My ideal leader; [Talks enthusiastically about what needs to be accomplished]	My ideal leader; [Stresses the importance of having a strong sense of purpose]
Once in a while	Once in a while	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Always	Fairly often	Fairly often	Always	Fairly often	Fairly often	Fairly often
Always	Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always	Always
Always	Always	Fairly often	Always	Always	Fairly often	Always
Fairly often	Fairly often	Sometimes	Sometimes	Sometimes	Sometimes	Fairly often
Always	Not at all	Not at all	Always	Always	Sometimes	Once in a while
Always	Always	Always	Always	Fairly often	Always	Always
Always	Always	Always	Always	Always	Always	Fairly often
Sometimes	Fairly often	Fairly often	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always	Always
Fairly often	Fairly often	Fairly often	Fairly often	Always	Fairly often	Fairly often
Fairly often	Fairly often	Fairly often	Always	Always	Always	Fairly often
Fairly often	Fairly often	Fairly often	Sometimes	Fairly often	Sometimes	Fairly often
Fairly often	Fairly often	Once in a while	Always	Always	Sometimes	Fairly often
Always	Always	Always	Fairly often	Fairly often	Always	Fairly often
Sometimes	Always	Fairly often	Fairly often	Always	Always	Always
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Fairly often	Always	Fairly often	Always	Always	Always	Fairly often
Fairly often	Always	Sometimes	Always	Always	Always	Fairly often
Always	Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always	Always
Fairly often	Fairly often	Always	Fairly often	Fairly often	Always	Always
Fairly often	Sometimes	Fairly often	Always	Fairly often	Sometimes	Always
Fairly often	Fairly often	Fairly often	Sometimes	Fairly often	Sometimes	Fairly often
Always	Always	Fairly often	Always	Fairly often	Fairly often	Always
Sometimes	Fairly often	Always	Fairly often	Always	Sometimes	Sometimes
Fairly often	Fairly often	Fairly often	Always	Always	Fairly often	Always
Fairly often	Fairly often	Always	Always	Fairly often	Fairly often	Always
Always	Always	Fairly often	Always	Always	Always	Fairly often
Fairly often	Once in a while	Always	Always	Always	Always	Always
Fairly often	Always	Fairly often	Always	Always	Always	Fairly often
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Always	Always	Sometimes	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always	Always
Always	Always	Always	Fairly often	Always	Always	Always
Fairly often	Fairly often	Fairly often	Always	Fairly often	Fairly often	Always
Fairly often	Fairly often	Once in a while	Always	Always	Always	Sometimes
Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Always	Always	Always	Always	Always	Always	Always
Fairly often	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Always	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Fairly often	Fairly often	Always	Always	Always	Fairly often	Fairly often
Always	Always	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes

My ideal leader; [Spends time teaching and coaching]	My ideal leader; [Makes clear what one can expect to receive when performance goals are achieved]	My ideal leader; [Goes beyond self-interest for the group]	My ideal leader; [Treats me as an individual rather than just a member of the group]	My ideal leader; [Demonstrates that problems must reoccur before taking action]	My ideal leader; [Acts in ways that builds my respect for him/her]	My ideal leader; [Considers the moral and ethical consequences of decisions]
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Fairly often	Always
Fairly often	Fairly often	Always	Sometimes	Not at all	Fairly often	Always
Always	Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always	Always
Fairly often	Always	Always	Always	Not at all	Fairly often	Always
Fairly often	Sometimes	Always	Always	Not at all	Always	Always
Once in a while	Once in a while	Always	Once in a while	Not at all	Always	Always
Fairly often	Fairly often	Fairly often	Always	Not at all	Fairly often	Always
Always	Fairly often	Always	Always	Not at all	Always	Always
Sometimes	Always	Sometimes	Always	Not at all	Always	Always
Always	Always	Always	Always	Not at all	Always	Always
Fairly often	Fairly often	Fairly often	Always	Sometimes	Fairly often	Always
Sometimes	Fairly often	Sometimes	Fairly often	Once in a while	Fairly often	Always
Fairly often	Sometimes	Fairly often	Fairly often	Once in a while	Fairly often	Fairly often
Fairly often	Always	Fairly often	Always	Not at all	Fairly often	Fairly often
Always	Sometimes	Always	Always	Sometimes	Always	Always
Fairly often	Fairly often	Fairly often	Always	Fairly often	Always	Always
Sometimes	Fairly often	Fairly often	Fairly often	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Always	Always	Not at all	Always	Fairly often
Fairly often	Always	Fairly often	Fairly often	Not at all	Always	Always
Always	Always	Always	Always	Sometimes	Always	Always
Always	Always	Always	Always	Always	Always	Always
Fairly often	Sometimes	Fairly often	Fairly often	Not at all	Fairly often	Fairly often
Fairly often	Always	Sometimes	Always	Not at all	Fairly often	Fairly often
Fairly often	Sometimes	Fairly often	Fairly often	Fairly often	Sometimes	Fairly often
Always	Sometimes	Always	Always	Sometimes	Fairly often	Always
Fairly often	Fairly often	Fairly often	Always	Not at all	Fairly often	Fairly often
Always	Always	Always	Always	Sometimes	Always	Always
Always	Always	Fairly often	Always	Once in a while	Always	Always
Sometimes	Always	Always	Always	Not at all	Always	Always
Always	Always	Always	Always	Always	Sometimes	Fairly often
Sometimes	Fairly often	Always	Fairly often	Not at all	Always	Always
Fairly often	Fairly often	Fairly often	Fairly often	Sometimes	Fairly often	Fairly often
Always	Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Not at all	Always	Always
Always	Always	Always	Always	Always	Always	Always
Fairly often	Sometimes	Fairly often	Fairly often	Once in a while	Fairly often	Fairly often
Once in a while	Once in a while	Fairly often	Sometimes	Not at all	Always	Always
Fairly often	Once in a while	Once in a while	Always	Once in a while	Fairly often	Fairly often
Always	Always	Fairly often	Always	Not at all	Always	Always
Sometimes	Sometimes	Sometimes	Sometimes	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Sometimes	Sometimes	Not at all	Once in a while	Sometimes
Always	Always	Always	Always	Not at all	Always	Always
Sometimes	Sometimes	Fairly often	Fairly often	Fairly often	Always	Always

Section C – Experience of Leadership Styles raw data

Timestamp	Email address	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Provides me with assistance in exchange for my efforts]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Re-examines critical assumptions to questions when they are appropriate]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Recognises problems and takes action before they become serious]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Pays attention when work deviates from standards or mistakes are made.]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Always gets involved when important issues arise]
10/17/2024 12:36:56	1	Once in a while	Fairly often	Once in a while	Sometimes	Once in a while
10/18/2024 13:26:34	2	Once in a while	Sometimes	Sometimes	Once in a while	Sometimes
10/18/2024 13:53:07	3	Always	Always	Always	Always	Always
10/19/2024 7:43:39	4	Always	Always	Always	Always	Always
10/20/2024 18:59:40	5	Fairly often	Fairly often	Always	Always	Fairly often
10/21/2024 6:55:40	6	Fairly often	Sometimes	Sometimes	Sometimes	Always
10/21/2024 7:06:45	7	Once in a while	Fairly often	Fairly often	Fairly often	Fairly often
10/21/2024 8:15:02	8	Fairly often	Always	Fairly often	Fairly often	Fairly often
10/21/2024 8:20:44	9	Sometimes	Fairly often	Always	Fairly often	Always
10/21/2024 8:31:25	10	Sometimes	Sometimes	Fairly often	Fairly often	Fairly often
10/21/2024 8:32:44	11	Fairly often	Fairly often	Sometimes	Fairly often	Fairly often
10/21/2024 12:33:11	12	Sometimes	Fairly often	Sometimes	Sometimes	Sometimes
10/21/2024 13:15:41	13	Once in a while	Sometimes	Fairly often	Fairly often	Always
10/21/2024 16:21:23	14	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
10/22/2024 5:35:10	15	Fairly often	Always	Fairly often	Sometimes	Always
10/22/2024 6:08:18	16	Sometimes	Fairly often	Always	Sometimes	Sometimes
10/22/2024 10:35:39	17	Sometimes	Sometimes	Fairly often	Sometimes	Fairly often
10/28/2024 7:13:19	18	Sometimes	Sometimes	Fairly often	Sometimes	Fairly often
10/29/2024 8:55:07	19	Fairly often	Fairly often	Fairly often	Fairly often	Always
10/31/2024 10:06:56	20	Always	Always	Always	Fairly often	Always
11/5/2024 7:05:29	21	Not at all	Once in a while	Sometimes	Sometimes	Sometimes
11/5/2024 7:36:05	22	Fairly often	Always	Always	Always	Always
11/5/2024 7:53:27	23	Sometimes	Sometimes	Once in a while	Once in a while	Once in a while
11/5/2024 9:13:21	24	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
11/5/2024 9:17:13	25	Fairly often	Fairly often	Fairly often	Always	Always
11/5/2024 9:24:13	26	Once in a while	Once in a while	Not at all	Always	Once in a while
11/5/2024 10:15:10	27	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes
11/5/2024 11:47:20	28	Once in a while	Fairly often	Fairly often	Always	Always
11/5/2024 12:09:45	29	Always	Fairly often	Always	Fairly often	Always
11/7/2024 8:08:13	30	Not at all	Not at all	Sometimes	Not at all	Once in a while
11/7/2024 8:16:19	31	Not at all	Sometimes	Sometimes	Sometimes	Fairly often
11/7/2024 8:20:03	32	Sometimes	Sometimes	Always	Always	Sometimes
11/7/2024 8:26:37	33	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
11/7/2024 8:56:51	34	Always	Always	Always	Always	Always
11/7/2024 10:22:38	35	Always	Always	Always	Always	Always
11/7/2024 10:48:14	36	Always	Always	Always	Always	Always
11/7/2024 11:09:50	37	Fairly often	Fairly often	Fairly often	Fairly often	Always
11/7/2024 12:20:19	38	Once in a while	Once in a while	Fairly often	Once in a while	Once in a while
11/7/2024 12:36:57	39	Fairly often	Sometimes	Sometimes	Always	Always
11/9/2024 13:39:20	40	Sometimes	Sometimes	Sometimes	Fairly often	Fairly often
11/11/2024 8:42:31	41	Fairly often	Sometimes	Sometimes	Sometimes	Sometimes
11/11/2024 10:34:28	42	Sometimes	Fairly often	Fairly often	Fairly often	Fairly often
11/11/2024 19:03:52	43	Sometimes	Fairly often	Fairly often	Once in a while	Fairly often
11/12/2024 12:16:05	44	Fairly often	Sometimes	Fairly often	Sometimes	Fairly often

During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Talks about his/her most important values and beliefs]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Is always there when needed]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Seeks differing perspectives when solving problems]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Talks optimistically about the future]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Instils pride in me for being associated with him/her]
Once in a while	Fairly often	Fairly often	Once in a while	Sometimes
Sometimes	Sometimes	Sometimes	Sometimes	Once in a while
Always	Always	Always	Always	Always
Always	Always	Always	Always	Always
Fairly often	Fairly often	Always	Always	Fairly often
Once in a while	Always	Once in a while	Sometimes	Sometimes
Fairly often	Sometimes	Always	Once in a while	Once in a while
Always	Always	Always	Always	Always
Fairly often	Always	Fairly often	Always	Always
Not at all	Fairly often	Sometimes	Sometimes	Sometimes
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Not at all	Once in a while	Sometimes	Sometimes	Sometimes
Sometimes	Sometimes	Fairly often	Fairly often	Sometimes
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Always	Always	Fairly often	Fairly often	Sometimes
Sometimes	Fairly often	Always	Fairly often	Fairly often
Always	Always	Always	Always	Sometimes
Sometimes	Fairly often	Sometimes	Sometimes	Fairly often
Fairly often	Always	Fairly often	Always	Always
Fairly often	Always	Fairly often	Always	Sometimes
Not at all	Fairly often	Sometimes	Fairly often	Once in a while
Always	Always	Fairly often	Sometimes	Always
Once in a while	Once in a while	Once in a while	Sometimes	Fairly often
Fairly often	Fairly often	Sometimes	Sometimes	Fairly often
Always	Always	Fairly often	Fairly often	Fairly often
Sometimes	Once in a while	Not at all	Fairly often	Sometimes
Sometimes	Fairly often	Sometimes	Sometimes	Fairly often
Sometimes	Always	Fairly often	Always	Always
Fairly often	Always	Fairly often	Fairly often	Always
Not at all	Not at all	Not at all	Always	Not at all
Once in a while	Once in a while	Once in a while	Sometimes	Once in a while
Once in a while	Sometimes	Fairly often	Fairly often	Sometimes
Sometimes	Once in a while	Once in a while	Not at all	Once in a while
Always	Always	Always	Always	Always
Always	Always	Always	Always	Always
Always	Always	Always	Always	Always
Fairly often	Always	Fairly often	Fairly often	Fairly often
Sometimes	Fairly often	Sometimes	Fairly often	Once in a while
Fairly often	Always	Fairly often	Sometimes	Fairly often
Once in a while	Fairly often	Sometimes	Sometimes	Sometimes
Sometimes	Sometimes	Fairly often	Sometimes	Fairly often
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Once in a while	Sometimes	Sometimes	Fairly often	Fairly often
Sometimes	Fairly often	Fairly often	Fairly often	Fairly often

During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Is specific about who is responsible for reaching performance targets]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Takes action before things go wrong]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Talks enthusiastically about what needs to be accomplished]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Stresses the importance of having a strong sense of purpose]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Spends time teaching and coaching]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Makes clear what one can expect to receive when performance goals are achieved]
Sometimes	Fairly often	Once in a while	Sometimes	Sometimes	Once in a while
Once in a while	Sometimes	Sometimes	Sometimes	Sometimes	Once in a while
Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always
Always	Always	Fairly often	Fairly often	Fairly often	Fairly often
Sometimes	Sometimes	Sometimes	Once in a while	Once in a while	Fairly often
Fairly often	Fairly often	Fairly often	Not at all	Not at all	Not at all
Fairly often	Fairly often	Fairly often	Fairly often	Sometimes	Fairly often
Always	Always	Always	Always	Always	Fairly often
Fairly often	Fairly often	Fairly often	Not at all	Sometimes	Once in a while
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Once in a while	Once in a while	Once in a while	Not at all	Not at all	Not at all
Sometimes	Fairly often	Fairly often	Fairly often	Once in a while	Fairly often
Sometimes	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes
Not at all	Fairly often	Once in a while	Once in a while	Fairly often	Not at all
Always	Fairly often	Fairly often	Fairly often	Fairly often	Once in a while
Always	Fairly often	Fairly often	Fairly often	Always	Always
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Always	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Always	Always	Always	Fairly often	Fairly often	Always
Sometimes	Sometimes	Sometimes	Sometimes	Once in a while	Once in a while
Fairly often	Fairly often	Always	Always	Always	Fairly often
Once in a while	Once in a while	Sometimes	Once in a while	Once in a while	Once in a while
Once in a while	Fairly often	Sometimes	Always	Once in a while	Sometimes
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Sometimes
Once in a while	Once in a while	Sometimes	Sometimes	Sometimes	Once in a while
Fairly often	Fairly often	Sometimes	Sometimes	Always	Sometimes
Always	Always	Always	Always	Always	Always
Always	Always	Fairly often	Always	Always	Always
Not at all	Sometimes	Sometimes	Sometimes	Not at all	Not at all
Once in a while	Once in a while	Once in a while	Once in a while	Once in a while	Once in a while
Sometimes	Always	Always	Sometimes	Sometimes	Sometimes
Once in a while	Once in a while	Not at all	Once in a while	Once in a while	Once in a while
Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always
Always	Always	Always	Always	Always	Always
Always	Fairly often	Fairly often	Always	Fairly often	Fairly often
Not at all	Fairly often	Sometimes	Not at all	Not at all	Not at all
Fairly often	Sometimes	Once in a while	Fairly often	Fairly often	Once in a while
Sometimes	Once in a while	Once in a while	Once in a while	Not at all	Not at all
Sometimes	Fairly often	Sometimes	Sometimes	Sometimes	Sometimes
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Sometimes	Fairly often	Fairly often	Sometimes	Once in a while	Once in a while
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes

During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Goes beyond self-interest for the group]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Treats me as an individual rather than just a member of the group]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Demonstrates that problems must reoccur before taking action]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Acts in ways that builds my respect for him/her]	During your personal experience on remote mining projects in the DRC, did your Leadership demonstrate any of these behaviours? [Considers the moral and ethical consequences of decisions]
Fairly often	Sometimes	Once in a while	Once in a while	Sometimes
Sometimes	Once in a while	Sometimes	Sometimes	Sometimes
Always	Always	Always	Always	Always
Always	Always	Always	Always	Always
Sometimes	Fairly often	Not at all	Fairly often	Always
Fairly often	Sometimes	Once in a while	Fairly often	Sometimes
Always	Always	Not at all	Always	Always
Fairly often	Always	Not at all	Fairly often	Fairly often
Always	Always	Not at all	Always	Always
Sometimes	Sometimes	Not at all	Fairly often	Fairly often
Fairly often	Fairly often	Once in a while	Fairly often	Fairly often
Sometimes	Once in a while	Sometimes	Sometimes	Fairly often
Fairly often	Fairly often	Sometimes	Fairly often	Fairly often
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Sometimes	Always	Not at all	Always	Always
Fairly often	Fairly often	Sometimes	Always	Fairly often
Always	Always	Fairly often	Sometimes	Fairly often
Sometimes	Fairly often	Once in a while	Sometimes	Sometimes
Fairly often	Always	Once in a while	Always	Fairly often
Fairly often	Fairly often	Not at all	Always	Always
Sometimes	Fairly often	Once in a while	Fairly often	Sometimes
Always	Fairly often	Not at all	Always	Always
Once in a while	Once in a while	Once in a while	Sometimes	Sometimes
Fairly often	Always	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Sometimes	Fairly often	Fairly often
Sometimes	Once in a while	Sometimes	Once in a while	Sometimes
Fairly often	Always	Once in a while	Fairly often	Fairly often
Always	Always	Not at all	Always	Always
Always	Always	Once in a while	Always	Always
Not at all	Not at all	Sometimes	Not at all	Not at all
Once in a while	Once in a while	Once in a while	Once in a while	Once in a while
Fairly often	Fairly often	Not at all	Fairly often	Fairly often
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Always	Always	Always	Always	Always
Always	Always	Not at all	Always	Always
Always	Always	Always	Always	Always
Fairly often	Always	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Sometimes	Once in a while	Always
Once in a while	Fairly often	Once in a while	Sometimes	Always
Sometimes	Sometimes	Fairly often	Sometimes	Sometimes
Sometimes	Sometimes	Fairly often	Fairly often	Sometimes
Fairly often	Sometimes	Not at all	Fairly often	Fairly often
Fairly often	Always	Not at all	Fairly often	Always
Fairly often	Fairly often	Sometimes	Fairly often	Fairly often

Section D – Experience of Talent Retention and Development factors raw data

Timestamp	Email address	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Actively supports talent development]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Fosters a culture of continuous learning and skill development]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Prioritizes the growth and development of their team members]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Provides constructive feedback and support to facilitate talent development]
10/17/2024 12:36:56	1	Once in a while	Fairly often	Sometimes	Once in a while
10/18/2024 13:26:34	2	Fairly often	Sometimes	Sometimes	Sometimes
10/18/2024 13:53:07	3	Always	Sometimes	Always	Always
10/19/2024 7:43:39	4	Always	Always	Always	Always
10/20/2024 18:59:40	5	Fairly often	Fairly often	Sometimes	Sometimes
10/21/2024 6:55:40	6	Sometimes	Sometimes	Once in a while	Once in a while
10/21/2024 7:06:45	7	Once in a while	Sometimes	Sometimes	Fairly often
10/21/2024 8:15:02	8	Sometimes	Sometimes	Once in a while	Not at all
10/21/2024 8:20:44	9	Always	Always	Always	Always
10/21/2024 8:31:25	10	Once in a while	Once in a while	Once in a while	Sometimes
10/21/2024 8:32:44	11	Fairly often	Fairly often	Fairly often	Fairly often
10/21/2024 12:33:11	12	Once in a while	Not at all	Once in a while	Not at all
10/21/2024 13:15:41	13	Fairly often	Sometimes	Sometimes	Sometimes
10/21/2024 16:21:23	14	Fairly often	Fairly often	Fairly often	Fairly often
10/22/2024 5:35:10	15	Once in a while	Sometimes	Sometimes	Sometimes
10/22/2024 6:08:18	16	Always	Always	Fairly often	Fairly often
10/22/2024 10:35:39	17	Fairly often	Fairly often	Fairly often	Fairly often
10/28/2024 7:13:19	18	Sometimes	Sometimes	Sometimes	Sometimes
10/29/2024 8:55:07	19	Fairly often	Fairly often	Fairly often	Fairly often
10/31/2024 10:06:56	20	Always	Always	Always	Always
11/5/2024 7:05:29	21	Sometimes	Sometimes	Sometimes	Fairly often
11/5/2024 7:36:05	22	Always	Fairly often	Always	Fairly often
11/5/2024 7:53:27	23	Fairly often	Fairly often	Fairly often	Sometimes
11/5/2024 9:13:21	24	Sometimes	Once in a while	Once in a while	Once in a while
11/5/2024 9:17:13	25	Fairly often	Always	Fairly often	Fairly often
11/5/2024 9:24:13	26	Once in a while	Once in a while	Once in a while	Once in a while
11/5/2024 10:15:10	27	Sometimes	Sometimes	Fairly often	Always
11/5/2024 11:47:20	28	Always	Always	Always	Always
11/5/2024 12:09:45	29	Always	Always	Always	Always
11/7/2024 8:08:13	30	Once in a while	Once in a while	Not at all	Not at all
11/7/2024 8:16:19	31	Fairly often	Fairly often	Not at all	Not at all
11/7/2024 8:20:03	32	Sometimes	Once in a while	Sometimes	Fairly often
11/7/2024 8:26:37	33	Sometimes	Sometimes	Once in a while	Sometimes
11/7/2024 8:56:51	34	Always	Always	Always	Always
11/7/2024 10:22:38	35	Always	Always	Always	Always
11/7/2024 10:48:14	36	Always	Always	Always	Always
11/7/2024 11:09:50	37	Fairly often	Fairly often	Always	Fairly often
11/7/2024 12:20:19	38	Sometimes	Once in a while	Once in a while	Once in a while
11/7/2024 12:36:57	39	Sometimes	Fairly often	Sometimes	Always
11/9/2024 13:39:20	40	Not at all	Not at all	Not at all	Once in a while
11/11/2024 8:42:31	41	Sometimes	Sometimes	Once in a while	Sometimes
11/11/2024 10:34:28	42	Sometimes	Fairly often	Fairly often	Sometimes
11/11/2024 19:03:52	43	Once in a while	Sometimes	Sometimes	Once in a while
11/12/2024 12:16:05	44	Sometimes	Sometimes	Sometimes	Sometimes

During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Empowers you to take ownership of your own professional development within the project]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Communicates the long-term vision and goals of talent development initiatives]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Provides opportunities within your project for career advancement and professional growth]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Creates a positive and supportive work environment that encourages employees to stay]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Communicates the value of employees and their contributions to the project's success]
Fairly often	Once in a while	Sometimes	Fairly often	Not at all
Sometimes	Sometimes	Sometimes	Sometimes	Fairly often
Always	Sometimes	Fairly often	Fairly often	Always
Always	Always	Always	Always	Always
Sometimes	Once in a while	Fairly often	Sometimes	Fairly often
Sometimes	Not at all	Once in a while	Fairly often	Fairly often
Once in a while	Not at all	Sometimes	Always	Always
Fairly often	Sometimes	Once in a while	Sometimes	Fairly often
Always	Always	Always	Always	Always
Once in a while	Once in a while	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Once in a while	Not at all	Not at all	Sometimes	Once in a while
Fairly often	Once in a while	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Sometimes	Not at all	Not at all	Fairly often	Fairly often
Always	Fairly often	Fairly often	Always	Always
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Fairly often	Sometimes	Sometimes	Sometimes	Sometimes
Always	Fairly often	Fairly often	Fairly often	Fairly often
Always	Fairly often	Always	Always	Always
Fairly often	Fairly often	Sometimes	Sometimes	Sometimes
Always	Fairly often	Fairly often	Fairly often	Always
Sometimes	Fairly often	Once in a while	Not at all	Sometimes
Fairly often	Sometimes	Sometimes	Fairly often	Sometimes
Always	Always	Always	Fairly often	Always
Once in a while	Once in a while	Not at all	Once in a while	Once in a while
Sometimes	Once in a while	Fairly often	Sometimes	Fairly often
Always	Always	Always	Always	Always
Always	Fairly often	Fairly often	Always	Always
Not at all	Not at all	Not at all	Not at all	Not at all
Not at all	Once in a while	Fairly often	Once in a while	Once in a while
Fairly often	Sometimes	Fairly often	Fairly often	Fairly often
Once in a while	Once in a while	Not at all	Once in a while	Fairly often
Always	Always	Always	Always	Always
Always	Always	Always	Always	Always
Always	Always	Always	Always	Always
Always	Fairly often	Fairly often	Fairly often	Fairly often
Sometimes	Once in a while	Once in a while	Fairly often	Fairly often
Fairly often	Not at all	Not at all	Once in a while	Sometimes
Not at all	Not at all	Not at all	Once in a while	Not at all
Sometimes	Once in a while	Sometimes	Sometimes	Sometimes
Fairly often	Sometimes	Fairly often	Sometimes	Fairly often
Sometimes	Once in a while	Sometimes	Fairly often	Always
Sometimes	Sometimes	Sometimes	Fairly often	Fairly often

During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Demonstrates a genuine interest in the professional growth and development of employees]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Fosters trust and transparency, which enhances employee loyalty and commitment to the project]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Influences my intention to continue working on this project in the long term]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Addresses concerns and challenges, reducing the likelihood of employee turnover]	During your experience on remote copper mining projects in the DRC, did your Leaders demonstrate any of these behaviours in terms of talent management; [Contributes significantly to talent retention efforts]
Once in a while	Sometimes	Once in a while	Once in a while	Fairly often
Fairly often	Fairly often	Sometimes	Sometimes	Sometimes
Always	Always	Always	Always	Fairly often
Always	Always	Always	Always	Always
Sometimes	Once in a while	Sometimes	Fairly often	Sometimes
Once in a while	Sometimes	Once in a while	Once in a while	Once in a while
Fairly often	Fairly often	Once in a while	Fairly often	Fairly often
Fairly often	Fairly often	Once in a while	Sometimes	Sometimes
Always	Always	Sometimes	Always	Always
Once in a while	Sometimes	Sometimes	Sometimes	Sometimes
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Not at all	Once in a while	Not at all	Sometimes	Once in a while
Fairly often	Fairly often	Fairly often	Fairly often	Sometimes
Fairly often	Fairly often	Sometimes	Sometimes	Fairly often
Once in a while	Always	Sometimes	Sometimes	Not at all
Fairly often	Fairly often	Always	Fairly often	Fairly often
Fairly often	Fairly often	Fairly often	Fairly often	Fairly often
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Fairly often	Fairly often	Fairly often	Always	Always
Always	Always	Always	Always	Always
Fairly often	Sometimes	Sometimes	Sometimes	Sometimes
Always	Always	Fairly often	Fairly often	Fairly often
Once in a while	Not at all	Not at all	Not at all	Not at all
Once in a while	Fairly often	Always	Sometimes	Sometimes
Always	Always	Fairly often	Fairly often	Fairly often
Once in a while	Not at all	Once in a while	Not at all	Once in a while
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Always	Always	Always	Always	Always
Always	Always	Always	Fairly often	Fairly often
Not at all	Not at all	Not at all	Not at all	Not at all
Not at all	Once in a while	Once in a while	Sometimes	Once in a while
Sometimes	Fairly often	Fairly often	Fairly often	Sometimes
Once in a while	Once in a while	Sometimes	Once in a while	Sometimes
Always	Always	Always	Always	Always
Always	Always	Always	Always	Fairly often
Always	Always	Always	Always	Always
Fairly often	Fairly often	Once in a while	Fairly often	Fairly often
Fairly often	Sometimes	Sometimes	Once in a while	Once in a while
Once in a while	Fairly often	Fairly often	Once in a while	Not at all
Not at all	Not at all	Once in a while	Once in a while	Not at all
Sometimes	Sometimes	Sometimes	Once in a while	Sometimes
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes	Fairly often	Fairly often	Always	Fairly often
Sometimes	Fairly often	Sometimes	Fairly often	Sometimes

APPENDIX F – CORRELATION ANALYSIS USING SPEARMAN RANK-ORDER ANALYSIS

Spearman's computation for correlation between Leadership Styles and Talent Retention

	Transformational Leadership Style		Talent Management Factors		Spearman's Rank-order Analysis - Computations				
Participants	Average Score	Rank	Average Score	Rank	Pearson's Correlate	N	T statistic	DF	p value
Individual 1	4,6	12,5	24	11	0,894353526	44	12,95614649	42	2,89348E-16
Individual 2	4,4	9,5	32	21					
Individual 3	9,6	42	49	35,5					
Individual 4	9,6	42	56	42,5					
Individual 5	7,6	30,5	31	18					
Individual 6	4,4	9,5	21	8					
Individual 7	6,2	18,5	32	21					
Individual 8	8,2	35	27	15					
Individual 9	9	39	54	38					
Individual 10	4,6	12,5	23	9					
Individual 11	7,2	26,5	42	30					
Individual 12	3,6	4	10	3					
Individual 13	6,2	18,5	34	26					
Individual 14	7,2	26,5	40	28					
Individual 15	7	24,5	24	11					
Individual 16	7,4	28,5	48	33,5					
Individual 17	7,8	32	42	30					
Individual 18	5,2	14	29	16,5					
Individual 19	8	33,5	45	32					
Individual 20	8	33,5	55	39,5					
Individual 21	4,4	9,5	32	21					
Individual 22	8,8	37,5	48	33,5					
Individual 23	3,8	6	20	6,5					
Individual 24	6,6	22,5	29	16,5					
Individual 25	7,4	28,5	49	35,5					
Individual 26	3,8	6	11	4					
Individual 27	6,6	22,5	32	21					
Individual 28	8,8	37,5	56	42,5					
Individual 29	8,6	36	52	37					
Individual 30	1,6	1	2	1					
Individual 31	2,8	2	17	5					
Individual 32	6,2	18,5	35	27					
Individual 33	3,2	3	20	6,5					
Individual 34	9,6	42	56	42,5					
Individual 35	9,6	42	55	39,5					
Individual 36	9,6	42	56	42,5					
Individual 37	7,6	30,5	42	30					
Individual 38	4,4	9,5	24	11					
Individual 39	6	16	25	13,5					
Individual 40	3,8	6	4	2					
Individual 41	5,4	15	25	13,5					
Individual 42	7	24,5	33	24,5					
Individual 43	6,4	21	33	24,5					
Individual 44	6,2	18,5	32	21					

	Transactional Leadership Style		Talent Management Factors		Spearman's Rank-order Analysis - Computations				
Participants	Average Score	Rank	Average Score	Rank	Pearson's Correlate	N	T statistic	DF	p value
Individual 1	3,7	16	24	11	0,287951197	44	1,948672921	42	0,058035614
Individual 2	4,0	22,5	32	21					
Individual 3	5,3	41,5	49	35,5					
Individual 4	5,3	41,5	56	42,5					
Individual 5	3,3	10	31	18					
Individual 6	5,0	38,5	21	8					
Individual 7	2,3	2,5	32	21					
Individual 8	4,0	22,5	27	15					
Individual 9	3,3	10	54	38					
Individual 10	3,0	5	23	9					
Individual 11	4,7	34,5	42	30					
Individual 12	4,0	22,5	10	3					
Individual 13	3,7	16	34	26					
Individual 14	4,3	29,5	40	28					
Individual 15	2,3	2,5	24	11					
Individual 16	4,0	22,5	48	33,5					
Individual 17	5,7	44	42	30					
Individual 18	4,0	22,5	29	16,5					
Individual 19	4,7	34,5	45	32					
Individual 20	4,3	29,5	55	39,5					
Individual 21	3,3	10	32	21					
Individual 22	3,3	10	48	33,5					
Individual 23	4,7	34,5	20	6,5					
Individual 24	3,3	10	29	16,5					
Individual 25	4,0	22,5	49	35,5					
Individual 26	4,0	22,5	11	4					
Individual 27	4,0	22,5	32	21					
Individual 28	3,3	10	56	42,5					
Individual 29	4,7	34,5	52	37					
Individual 30	3,3	10	2	1					
Individual 31	3,3	10	17	5					
Individual 32	2,0	1	35	27					
Individual 33	4,3	29,5	20	6,5					
Individual 34	5,3	41,5	56	42,5					
Individual 35	4,0	22,5	55	39,5					
Individual 36	5,3	41,5	56	42,5					
Individual 37	4,7	34,5	42	30					
Individual 38	2,7	4	24	11					
Individual 39	4,0	22,5	25	13,5					
Individual 40	4,3	29,5	4	2					
Individual 41	5,0	38,5	25	13,5					
Individual 42	3,7	16	33	24,5					
Individual 43	3,3	10	33	24,5					
Individual 44	4,7	34,5	32	21					

	Laissez-faire Leadership Style		Talent Management Factors		Spearman's Rank-order Analysis - Computations				
Participants	Average Score	Rank	Average Score	Rank	Pearson's Correlate	N	T statistic	DF	p value
Individual 1	4,0	36,5	24	11	-0,683551113	44	6,069189531	42	3,15831E-07
Individual 2	4,0	36,5	32	21					
Individual 3	0,0	8,5	49	35,5					
Individual 4	0,0	8,5	56	42,5					
Individual 5	2,0	23,5	31	18					
Individual 6	0,0	8,5	21	8					
Individual 7	3,0	31	32	21					
Individual 8	1,0	17,5	27	15					
Individual 9	0,0	8,5	54	38					
Individual 10	2,0	23,5	23	9					
Individual 11	2,0	23,5	42	30					
Individual 12	5,0	40,5	10	3					
Individual 13	2,0	23,5	34	26					
Individual 14	2,0	23,5	40	28					
Individual 15	0,0	8,5	24	11					
Individual 16	3,0	31	48	33,5					
Individual 17	1,0	17,5	42	30					
Individual 18	2,0	23,5	29	16,5					
Individual 19	0,0	8,5	45	32					
Individual 20	0,0	8,5	55	39,5					
Individual 21	3,0	31	32	21					
Individual 22	0,0	8,5	48	33,5					
Individual 23	6,0	42,5	20	6,5					
Individual 24	2,0	23,5	29	16,5					
Individual 25	0,0	8,5	49	35,5					
Individual 26	6,0	42,5	11	4					
Individual 27	3,0	31	32	21					
Individual 28	0,0	8,5	56	42,5					
Individual 29	0,0	8,5	52	37					
Individual 30	7,0	44	2	1					
Individual 31	4,0	36,5	17	5					
Individual 32	4,0	36,5	35	27					
Individual 33	5,0	40,5	20	6,5					
Individual 34	0,0	8,5	56	42,5					
Individual 35	0,0	8,5	55	39,5					
Individual 36	0,0	8,5	56	42,5					
Individual 37	0,0	8,5	42	30					
Individual 38	4,0	36,5	24	11					
Individual 39	0,0	8,5	25	13,5					
Individual 40	2,0	23,5	4	2					
Individual 41	4,0	36,5	25	13,5					
Individual 42	2,0	23,5	33	24,5					
Individual 43	3,0	31	33	24,5					
Individual 44	2,0	23,5	32	21					

Spearman's computation for correlation between Leadership behaviours and Talent Retention

	Talent Retention Factors		Transformational Leadership Behaviours														
			Idealised Influence (Behaviour)			Idealised Influence (Attributed)			Inspirational Motivational			Intellectual Stimulation			Individual Consideration		
Participants	Average Score	Rank	Average Score	Rank	Pearson's Correlate	Average Score	Rank	Pearson's Correlate	Average Score	Rank	Pearson's Correlate	Average Score	Rank	Pearson's Correlate	Average Score	Rank	Pearson's Correlate
Individual 1	24	11	5	9,5	0,822924758	6	9,5	0,85642593	2	2	0,808753144	6	27	0,732611504	4	13,5	0,839254833
Individual 2	32	21	6	13,5		5	4,5		4	11		4	10,5		3	8,5	
Individual 3	49	35,5	12	41,5	**N**	12	40	**N**	8	40,5	**N**	8	41,5	**N**	8	39,5	**N**
Individual 4	56	42,5	12	41,5	44	12	40	44	8	40,5	44	8	41,5	44	8	39,5	44
Individual 5	31	18	10	32		8	18		7	34		7	35,5		6	26,5	
Individual 6	21	8	4	6,5	**T statistic**	8	18	**T statistic**	4	11	**T statistic**	3	5,5	**T statistic**	3	8,5	**T statistic**
Individual 7	32	21	7	18,5	9,386884608	9	27	10,75072204	4	11	8,911561845	7	35,5	6,975517345	4	13,5	10,00296111
Individual 8	27	15	10	32		10	33,5		7	34		8	41,5		6	26,5	
Individual 9	54	38	11	37,5	**DF**	12	40	**DF**	8	40,5	**DF**	6	27	**DF**	8	39,5	**DF**
Individual 10	23	9	3	3	42	7	13,5	42	5	18	42	4	10,5	42	4	13,5	42
Individual 11	42	30	9	25		9	27		6	26		6	27		6	26,5	
Individual 12	10	3	3	3	**p value**	6	9,5	**p value**	3	4,5	**p value**	5	17	**p value**	1	2	**p value**
Individual 13	34	26	8	21,5	7,16538E-12	8	18	1,23694E-13	6	26	3,11373E-11	5	17	1,57552E-08	4	13,5	1,11214E-12
Individual 14	40	28	9	25		9	27		6	26		6	27		6	26,5	
Individual 15	24	11	9	25		8	18		4	11		7	35,5		7	32,5	
Individual 16	48	33,5	8	21,5		10	33,5		6	26		7	35,5		6	26,5	
Individual 17	42	30	10	32		8	18		7	34		6	27		8	39,5	
Individual 18	29	16,5	6	13,5		7	13,5		4	11		4	10,5		5	19,5	
Individual 19	45	32	9	25		11	35		7	34		6	27		7	32,5	
Individual 20	55	39,5	10	32		9	27		8	40,5		7	35,5		6	26,5	
Individual 21	32	21	4	6,5		6	9,5		5	18		3	5,5		4	13,5	
Individual 22	48	33,5	12	41,5		12	40		6	26		7	35,5		7	32,5	
Individual 23	20	6,5	4	6,5		6	9,5		4	11		3	5,5		2	4,5	
Individual 24	29	16,5	10	32		9	27		4	11		5	17		5	19,5	
Individual 25	49	35,5	10	32		9	27		6	26		6	27		6	26,5	
Individual 26	11	4	6	13,5		5	4,5		5	18		1	2		2	4,5	
Individual 27	32	21	7	18,5		9	27		4	11		5	17		8	39,5	
Individual 28	56	42,5	10	32		12	40		8	40,5		6	27		8	39,5	
Individual 29	52	37	11	37,5		12	40		6	26		6	27		8	39,5	
Individual 30	2	1	2	1		0	1		6	26		0	1		0	1	
Individual 31	17	5	3	3		3	2		3	4,5		3	5,5		2	4,5	
Individual 32	35	27	6	13,5		8	18		7	34		5	17		5	19,5	
Individual 33	20	6,5	5	9,5		5	4,5		0	1		3	5,5		3	8,5	
Individual 34	56	42,5	12	41,5		12	40		8	40,5		8	41,5		8	39,5	
Individual 35	55	39,5	12	41,5		12	40		8	40,5		8	41,5		8	39,5	
Individual 36	56	42,5	12	41,5		12	40		8	40,5		8	41,5		8	39,5	
Individual 37	42	30	10	32		9	27		6	26		6	27		7	32,5	
Individual 38	24	11	6	13,5		5	4,5		5	18		3	5,5		3	8,5	
Individual 39	25	13,5	10	32		6	9,5		3	4,5		5	17		6	26,5	
Individual 40	4	2	4	6,5		6	9,5		3	4,5		4	10,5		2	4,5	
Individual 41	25	13,5	6	13,5		8	18		4	11		5	17		4	13,5	
Individual 42	33	24,5	9	25		9	27		6	26		6	27		5	19,5	
Individual 43	33	24,5	7	18,5		9	27		6	26		5	17		5	19,5	
Individual 44	32	21	7	18,5		9	27		5	18		5	17		5	19,5	

	Talent Retention Factors		Transactional Leadership Behaviours								
			Contingent Reward			Management-by-exception (Active)			Management-by-exception (Passive)		
Participants	Average Score	Rank	Average Score	Rank	Pearson's Correlate	Average Score	Rank	Pearson's Correlate	Average Score	Rank	Pearson's Correlate
Individual 1	24	11	4	11	0,800960406	3	28,5	-0,778069605	4	35,5	-0,33742412
Individual 2	32	21	3	6		5	40,5		4	35,5	
Individual 3	49	35,5	12	41	**N**	0	4,5	**N**	4	35,5	**N**
Individual 4	56	42,5	12	41	44	0	4,5	44	4	35,5	44
Individual 5	31	18	10	35,5		0	4,5		0	3,5	
Individual 6	21	8	8	26,5	**T statistic**	4	35	**T statistic**	3	25	**T statistic**
Individual 7	32	21	4	11	8,66989568	2	19,5	8,027130483	1	10,5	2,322995572
Individual 8	27	15	9	31		2	19,5		1	10,5	
Individual 9	54	38	9	31	**DF**	1	11	**DF**	0	3,5	**DF**
Individual 10	23	9	6	17	42	2	19,5	42	1	10,5	42
Individual 11	42	30	9	31		2	19,5		3	25	
Individual 12	10	3	3	6	**p value**	5	40,5	**p value**	4	35,5	**p value**
Individual 13	34	26	6	17	6,63862E-11	2	19,5	5,12822E-10	3	25	0,025095654
Individual 14	40	28	7	22		2	19,5		4	35,5	
Individual 15	24	11	3	6		3	28,5		1	10,5	
Individual 16	48	33,5	7	22		3	28,5		2	17,5	
Individual 17	42	30	10	35,5		3	28,5		4	35,5	
Individual 18	29	16,5	6	17		4	35		2	17,5	
Individual 19	45	32	10	35,5		2	19,5		2	17,5	
Individual 20	55	39,5	12	41		1	11		0	3,5	
Individual 21	32	21	3	6		4	35		3	25	
Individual 22	48	33,5	9	31		1	11		0	3,5	
Individual 23	20	6,5	4	11		6	43,5		4	35,5	
Individual 24	29	16,5	6	17		2	19,5		2	17,5	
Individual 25	49	35,5	8	26,5		1	11		3	25	
Individual 26	11	4	3	6		3	28,5		6	44	
Individual 27	32	21	8	26,5		2	19,5		2	17,5	
Individual 28	56	42,5	9	31		0	4,5		1	10,5	
Individual 29	52	37	12	41		1	11		1	10,5	
Individual 30	2	1	0	1		6	43,5		4	35,5	
Individual 31	17	5	2	3		5	40,5		3	25	
Individual 32	35	27	6	17		0	4,5		0	3,5	
Individual 33	20	6,5	4	11		5	40,5		4	35,5	
Individual 34	56	42,5	12	41		0	4,5		4	35,5	
Individual 35	55	39,5	12	41		0	4,5		0	3,5	
Individual 36	56	42,5	12	41		0	4,5		4	35,5	
Individual 37	42	30	10	35,5		2	19,5		2	17,5	
Individual 38	24	11	1	2		4	35		3	25	
Individual 39	25	13,5	7	22		2	19,5		3	25	
Individual 40	4	2	4	11		4	35		5	42,5	
Individual 41	25	13,5	7	22		3	28,5		5	42,5	
Individual 42	33	24,5	8	26,5		2	19,5		1	10,5	
Individual 43	33	24,5	5	14		4	35		1	10,5	
Individual 44	32	21	7	22		4	35		3	25	

	Talent Retention Factors		Laissez-faire Leadership Behaviours		
			Laissez-faire		
Participants	**Average Score**	**Rank**	**Average Score**	**Rank**	**Pearson's Correlate**
Individual 1	24	11	4	36,5	-0,683551113
Individual 2	32	21	4	36,5	
Individual 3	49	35,5	0	8,5	**N**
Individual 4	56	42,5	0	8,5	44
Individual 5	31	18	2	23,5	
Individual 6	21	8	0	8,5	**T statistic**
Individual 7	32	21	3	31	6,069189531
Individual 8	27	15	1	17,5	
Individual 9	54	38	0	8,5	**DF**
Individual 10	23	9	2	23,5	42
Individual 11	42	30	2	23,5	
Individual 12	10	3	5	40,5	**p value**
Individual 13	34	26	2	23,5	3,15831E-07
Individual 14	40	28	2	23,5	
Individual 15	24	11	0	8,5	
Individual 16	48	33,5	3	31	
Individual 17	42	30	1	17,5	
Individual 18	29	16,5	2	23,5	
Individual 19	45	32	0	8,5	
Individual 20	55	39,5	0	8,5	
Individual 21	32	21	3	31	
Individual 22	48	33,5	0	8,5	
Individual 23	20	6,5	6	42,5	
Individual 24	29	16,5	2	23,5	
Individual 25	49	35,5	0	8,5	
Individual 26	11	4	6	42,5	
Individual 27	32	21	3	31	
Individual 28	56	42,5	0	8,5	
Individual 29	52	37	0	8,5	
Individual 30	2	1	7	44	
Individual 31	17	5	4	36,5	
Individual 32	35	27	4	36,5	
Individual 33	20	6,5	5	40,5	
Individual 34	56	42,5	0	8,5	
Individual 35	55	39,5	0	8,5	
Individual 36	56	42,5	0	8,5	
Individual 37	42	30	0	8,5	
Individual 38	24	11	4	36,5	
Individual 39	25	13,5	0	8,5	
Individual 40	4	2	2	23,5	
Individual 41	25	13,5	4	36,5	
Individual 42	33	24,5	2	23,5	
Individual 43	33	24,5	3	31	
Individual 44	32	21	2	23,5	

APPENDIX G – STATISTICAL SIGNIFICANCE USING MANN WHITNEY U-TEST

Mann Whitney u-test computations for Importance and Experience of Leadership Styles

Example computation for Transformational Leadership Style:

	Transformational Leadership								
nts	Importance	Personal Experience	Combined	Assigned Group	Combined Ascending	Assigned Group	Rank	Corrected Rank (for ties)	Mann Whitney u-test Computations
Individual 1	2,00	1,93	2,00	A	0,73	B	1	1	For MWUT Importance A
Individual 2	3,07	1,83	3,07	A	1,20	B	2	2	2316,5
Individual 3	4,00	4,00	4,00	A	1,27	B	3	3	
Individual 4	3,90	4,00	3,90	A	1,50	B	4	4	For MWUT Experience B
Individual 5	3,53	3,20	3,53	A	1,53	B	5	5	1599,5
Individual 6	3,07	1,80	3,07	A	1,57	B	6	6,5	
Individual 7	2,03	2,57	2,03	A	1,57	B	6	6,5	Total MWUT
Individual 8	3,60	3,43	3,60	A	1,80	B	8	8	3916
Individual 9	3,70	3,73	3,70	A	1,83	B	9	9,5	Total Rank
Individual 10	2,90		2,90	A	1,83	B	9	9,5	3916
Individual 11	4,00	3,00	4,00	A	1,87	B	11	11	
Individual 12	3,10	1,50	3,10	A	1,93	B	12	12	Count for Importance A, n1
Individual 13	2,93	2,57	2,93	A	1,97	B	13	13	44
Individual 14	2,90	3,00	2,90	A	2,00	A	14	14	Count for Experience B, n2
Individual 15	2,73	2,93	2,73	A	2,03	A	15	15	44
Individual 16	3,87	3,10	3,87	A	2,17	B	16	16	
Individual 17	3,33	3,30	3,33	A	2,23	B	17	17	Mann Whitney U1
Individual 18	2,73	2,17	2,73	A	2,33	A	18	18	609,5
Individual 19	3,60	3,33	3,60	A	2,47	B	19	19	Mann Whitney U2
Individual 20	3,37	3,37	3,37	A	2,57	B	20	20	26208,5
Individual 21	3,93	1,87	3,93	A	2,57	B	21	21,5	
Individual 22	4,00	3,60	4,00	A	2,57	B	21	21,5	Mean of U
Individual 23	3,17	1,57	3,17	A	2,63	B	23	23	968
Individual 24	3,00	2,67	3,00	A	2,67	A	24	24	Standard deviation of U
Individual 25	2,90	3,07	2,90	A	2,67	A	25	26,5	119,827654
Individual 26	3,47	1,53	3,47	A	2,67	A	25	26,5	Z-score
Individual 27	2,83	2,77	2,83	A	2,67	B	25	26,5	-2,991796868
Individual 28	3,40	3,67	3,40	A	2,67	B	25	26,5	p-value
Individual 29	3,47	3,53	3,47	A	2,73	A	29	29,5	0,001386704
Individual 30	3,47	0,73	3,47	A	2,73	A	29	29,5	
Individual 31	3,03	1,20	3,03	A	2,77	B	31	31	
Individual 32	3,13	2,63	3,13	A	2,83	A	32	32	
Individual 33	3,00	1,27	3,00	A	2,90	A	33	34,5	
Individual 34	3,87	4,00	3,87	A	2,90	A	33	34,5	
Individual 35	3,80	4,00	3,80	A	2,90	A	33	34,5	
Individual 36	3,83	4,00	3,83	A	2,90	B	33	34,5	
Individual 37	3,00	3,17	3,00	A	2,93	A	37	37,5	
Individual 38	2,67	1,83	2,67	A	2,93	B	37	37,5	
Individual 39	2,67	2,47	2,67	A	3,00	A	39	41	
Individual 40	3,87	1,57	3,87	A	3,00	A	39	41	
Individual 41	2,33	2,23	2,33	A	3,00	A	39	41	
Individual 42	2,67	2,90	2,67	A	3,00	B	39	41	
Individual 43	3,57	2,67	3,57	A	3,00	B	39	41	
Individual 44	3,10	2,57	3,10	A	3,03	A	44	44	
			1,93	B	3,07	A	45	46	
			1,83	B	3,07	A	45	46	
			4,00	B	3,07	B	45	46	
			4,00	B	3,10	A	48	49	
			3,20	B	3,10	A	48	49	
			1,80	B	3,10	B	48	49	
			2,57	B	3,13	A	51	51	
			3,43	B	3,17	A	52	52,5	
			3,73	B	3,17	B	52	52,5	
			1,97	B	3,20	B	54	54	
			3,00	B	3,30	B	55	55	
			1,50	B	3,33	B	56	56	
			2,57	B	3,33	A	57	57	
			3,00	B	3,37	A	58	58,5	
			2,93	B	3,37	B	58	58,5	
			3,10	B	3,40	A	60	60	
			3,30	B	3,43	B	61	61	
			2,17	B	3,47	A	62	62,5	
			3,33	B	3,47	A	62	62,5	
			3,37	B	3,47	A	64	64	
			1,87	B	3,53	B	65	65	
			3,60	B	3,53	A	66	66	
			1,57	B	3,57	A	67	67	
			2,67	B	3,60	A	68	69	
			3,07	B	3,60	A	68	69	
			1,53	B	3,60	B	68	69	
			2,77	B	3,67	B	71	71	
			3,67	B	3,70	A	72	72	
			3,53	B	3,73	B	73	73	
			0,73	B	3,80	A	74	74	
			1,20	B	3,83	A	75	75	
			2,63	B	3,87	A	76	76	
			1,27	B	3,87	A	77	77,5	
			4,00	B	3,87	A	77	77,5	
			4,00	B	3,90	A	79	79	
			4,00	B	3,93	A	80	80	
			3,17	B	4,00	A	81	84,5	
			1,83	B	4,00	A	81	84,5	
			2,47	B	4,00	A	81	84,5	
			1,57	B	4,00	B	81	84,5	
			2,23	B	4,00	B	81	84,5	
			2,90	B	4,00	B	81	84,5	
			2,67	B	4,00	B	81	84,5	
			2,57	B	4,00	B	81	84,5	

Mann Whitney u-test computations for Importance and Experience of Leadership Behaviours

Example computation for Contingent Reward Leadership Behaviour:

	Contingent Reward								
Participants	**Importance**	**Personal Experience**	**Combined**	**Assigned Group**	**Combined Ascending**	**Assigned Group**	**Rank**	**Corrected Rank (for ties)**	**Mann Whitney u-test Computations**
Individual 1	6	4	6	A	0	B	1	1	**For MWUT Importance A**
Individual 2	9	3	9	A	1	B	2	2	2353,5
Individual 3	12	12	12	A	2	B	3	3	
Individual 4	12	12	12	A	3	B	4	6	**For MWUT Experience B**
Individual 5	11	10	11	A	3	B	4	6	1562,5
Individual 6	7	8	7	A	3	B	4	6	
Individual 7	7	4	7	A	3	B	4	6	**Total MWUT**
Individual 8	11	9	11	A	3	B	4	6	3916
Individual 9	9	9	9	A	4	A	9	11,5	**Total Rank**
Individual 10	9	6	9	A	4	B	9	11,5	3916
Individual 11	12	9	12	A	4	B	9	11,5	
Individual 12	10	3	10	A	4	B	9	11,5	**Count for Importance A, n1**
Individual 13	8	6	8	A	4	B	9	11,5	44
Individual 14	7	7	7	A	4	B	9	11,5	**Count for Experience B, n2**
Individual 15	11	3	11	A	5	B	15	15	44
Individual 16	8	7	8	A	6	A	16	19	
Individual 17	9	10	9	A	6	A	16	19	**Mann Whitney U1**
Individual 18	9	6	9	A	6	B	16	19	572,5
Individual 19	10	10	10	A	6	B	16	19	**Mann Whitney U2**
Individual 20	12	12	12	A	6	B	16	19	24617,5
Individual 21	8	3	8	A	6	B	16	19	
Individual 22	12	9	12	A	6	B	16	19	**Mean of U**
Individual 23	8	4	8	A	7	A	23	27,5	968
Individual 24	9	6	9	A	7	A	23	27,5	**Standard deviation of U**
Individual 25	8	8	8	A	7	A	23	27,5	119,827654
Individual 26	8	3	8	A	7	A	23	27,5	**Z-score**
Individual 27	9	8	9	A	7	A	23	27,5	-3,300573672
Individual 28	11	9	11	A	7	B	23	27,5	**p-value**
Individual 29	12	12	12	A	7	B	23	27,5	0,000482437
Individual 30	10	0	10	A	7	B	23	27,5	
Individual 31	12	2	12	A	7	B	23	27,5	
Individual 32	8	6	8	A	7	B	23	27,5	
Individual 33	9	4	9	A	8	A	33	38,5	
Individual 34	12	12	12	A	8	A	33	38,5	
Individual 35	12	12	12	A	8	A	33	38,5	
Individual 36	10	12	10	A	8	A	33	38,5	
Individual 37	9	10	9	A	8	A	33	38,5	
Individual 38	6	1	6	A	8	A	33	38,5	
Individual 39	4	7	4	A	8	A	33	38,5	
Individual 40	12	4	12	A	8	A	33	38,5	
Individual 41	7	7	7	A	8	B	33	38,5	
Individual 42	8	8	8	A	8	B	33	38,5	
Individual 43	11	5	11	A	8	B	33	38,5	
Individual 44	7	7	7	A	8	B	33	38,5	
			4	B	9	A	45	51,5	
			3	B	9	A	45	51,5	
			12	B	9	A	45	51,5	
			12	B	9	A	45	51,5	
			10	B	9	A	45	51,5	
			8	B	9	A	45	51,5	
			4	B	9	A	45	51,5	
			9	B	9	A	45	51,5	
			9	B	9	A	45	51,5	
			6	B	9	B	45	51,5	
			9	B	9	B	45	51,5	
			3	B	9	B	45	51,5	
			6	B	9	B	45	51,5	
			7	B	9	B	45	51,5	
			3	B	10	A	59	62,5	
			7	B	10	A	59	62,5	
			10	B	10	A	59	62,5	
			6	B	10	A	59	62,5	
			10	B	10	B	59	62,5	
			12	B	10	B	59	62,5	
			3	B	10	B	59	62,5	
			9	B	10	B	59	62,5	
			4	B	11	A	67	69	
			6	B	11	A	67	69	
			8	B	11	A	67	69	
			3	B	11	A	67	69	
			8	B	11	A	67	69	
			9	B	12	A	72	80	
			12	B	12	A	72	80	
			0	B	12	A	72	80	
			2	B	12	A	72	80	
			6	B	12	A	72	80	
			4	B	12	A	72	80	
			12	B	12	A	72	80	
			12	B	12	A	72	80	
			12	B	12	A	72	80	
			10	B	12	A	72	80	
			1	B	12	B	72	80	
			7	B	12	B	72	80	
			4	B	12	B	72	80	
			7	B	12	B	72	80	
			8	B	12	B	72	80	
			5	B	12	B	72	80	
			7	B	12	B	72	80	