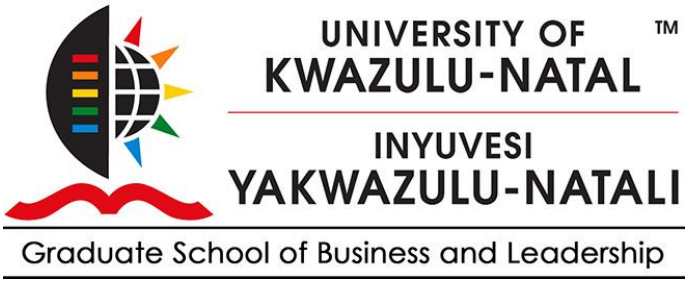

Successful Transition from a Technical Expert to First Line Management

By

Ntombenhle Khumalo

981170753

A dissertation submitted in partial fulfilment of the requirements for the degree

Of

Master of Business Administration

Graduate School of Business & Leadership

College of Law and Management Studies

Supervisor:

Prof Theuns Pelser

2016

Declaration

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Acknowledgements

I wish to express my sincere appreciation and gratitude to the following individuals, without whose assistance this study would not have been possible:

- To my supervisor, Dr Theuns Pelser, thanks are due for your guidance since the beginning of this year, and for all the deliberations we had to get this study to where it is now. Very many thanks and much appreciation.
- To GSB & L Administration staff, for continuous support throughout this journey.
- To all the respondents at Engen Refinery that participated in this study – thank you for your time and for filling out the survey. Your contribution was meaningful and much needed, and helped make this study a success.
- To my colleague Zakes Mhlanga and my former manager Sibusiso Zulu, thank you so much for your assistance and support – from the beginning until the end.
- To my colleague and friend Ntokozo Ngcobo, thank you so much for your assistance with printing and binding my assignments.
- To my manager Nikesh Haripersad, thanks are due for putting up with me being away from work, and for all the support provided during my study period.
- To my friend and colleague Mdu Miya, your assistance and motivation are noted. I would not have enrolled for this course if you did not push me to apply. Thank you so much for believing in me.
- To my family, and my husband Dr Vukile Khumalo, thank you for your continued support since I started my MBA journey. It was not an easy one, but you stood by my side and supported me throughout.
- To Dr David A. Barraclough, Thank you for proof-reading and editing my work to ensure that it is of a good quality.
- To my two children, Nolwazi and Ayabonga, thank you for allowing me to be absent from your lives while I was completing this work. Your efforts are much appreciated, and without your support I would not have done this at all.
- To my mother Sophia Ndebele, my brother Ndabenhle, and my sisters Nothando and Fikile: those encouraging phone calls and messages really made all the difference.
- To our house-helper Dudu Gwala, thank you so much for your support, and for the motherly love you gave to my family and fellow MBA students when we were studying for exams. It was highly appreciated.

- To my spiritual mother, Pastor Siziwe Chili, and my spiritual home, Hope of Glory ministries, thank you so much for your continued support and for the motivation you provided.
- Lastly, I would like to give thanks to the most-high God for being with me throughout the whole MBA journey. Without him by my side, I would not have done it.

Abstract

First-line managers face challenges in their process of transitioning to management. It is even more difficult for technical experts who have been performing at their peak in their technical careers – and now they have moved into a management position which is required. These skills may decide their fate in their management careers. The purpose of this research was to identify and make recommendations on the key set of skills that could support a successful transition from being a technical expert to first-line management. The objectives included identifying how to make the transition as seamless as possible, by using the right criteria to select the right expert for the first-line management job at hand. Another objective was to determine the key challenges that hinder success and to gauge the effectiveness of the interventions and programmes put in place to facilitate successful transitioning to management. The salient findings of this study were that most technical expert transitions to management through promotion, and the selection criteria used, were reasonable. It was also found that there were still a few interpersonal skill challenges that the newly appointed first line managers were encountering. The main recommendation is to create a transitioning programme that will facilitate and attend to the individual needs of each expert in transition. In order to improve effectiveness and to leverage the benefits of the programmes that are provided in a form of classroom learning, projects could be assigned to potential leaders, so as to provide the opportunity to exercise the newly-learned leadership skills.

Key words:

Technical expert, first-line management, transition, seamless, career, leadership, management.

Table of Contents

Description Page

List of Figures

Number Description Page

List of Tables

Number Description Page

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

In order for an organisation to be sustainable in this highly competitive environment, It is crucial for it to take its talent management programmes seriously – especially in the oil and gas industry where a huge amount of technical knowledge and skills have been earned over several years. It is also vital to ensure that such knowledge and skills are passed from the current generation to the next ones.

Times have changed, and gone are the days when companies had to complete a once-off investment in the training and up-skilling of an employee – and, in return, it was guaranteed that the employee would remain involved in the organisation until retirement. That was the traditional way of career management. The modern way involves an employee being able to exit the company at any time – irrespective of the company's investment in them. If an employee's expectations and career aspirations are not being met, they will simply move to another company. Organisations need to devise strategies to retain such employees.

Many companies tend to promote their technical experts to first-line management positions, with the assumption that the technical expert with the highest skill level is the best choice for promotion to first-line management. This assumption often sends these technical experts – newly appointed into management – over their own professional 'cliffs' (Lang & Thomas, 2013).

On the other hand, it is not always a bad idea to promote one's technical experts, since they usually have high-level knowledge regarding the company's intellectual property and trade secrets. There are a few other reasons for leaders wanting to promote technical experts to management positions, including: to increase remuneration, recognition, and motivation; and to ensure that they remain involved with the company. This is especially true nowadays, whereby most people are not concerned with remaining committed and loyal to one company, unless there is some form of incentive or mutual benefit (Mahoney, 2015).

This paper takes a close look at what it takes to make a successful, seamless transition from being a technical expert to holding a leading/managerial position, *without* falling off one's 'career cliff'. First, the attributes required in a technical expert which identify him/her as a potential leader, are examined. Second, support structures required to make a seamless transition to management are examined. Lastly, a closer examination of mechanisms currently being used to assist newly-transitioned managers is performed, and the impact these mechanisms have on ensuring a successful transition to a management career are evaluated.

1.2 Background to the Study

Most technical careers result in dead-ends in the long run, especially when the employee reaches the position of 'technical expert', and there are no further positions to promote to other than management or leadership positions. There also exists the tendency to pigeon-hole employees to the one specific activity that they specialise in. (Smith, 2012) This might limit the employee when they want to move to a better position in the future, because they have become the master of just a single aspect of the trade.

It is every ambitious person's dream to climb the corporate ladder until they reach a leadership position. Almost anyone would welcome the once-in-a-lifetime opportunity of being promoted to leadership, since it typically includes an enticing package: a salary increment, and potentially other company benefits, such as company cars, cell-phone allowances, and meetings in fancy restaurants. However, the excitement of a new title and increased benefits typically only lasts a few weeks, or perhaps a few months at most, up until reality hits and they start to realise that being a leader or manager comes at a price (Leite, 2010).

A new manager will increasingly realise that he/she has entered a corporate world different to the one they knew, where a completely different set of skills is required, and where the skills they had learnt and mastered for most of their career are delegated to subordinates. Usually, subordinates will be former colleagues – and now that the employee is in a management position, the former colleagues would have to be approached differently.

The most important skills, as required from all successful leaders, are outlined below (Leite, 2010):

- Effective communication (effective business writing, high-level reporting and presentation skills).
- Influencing and motivational skills.
- Delegation of work.
- People management skills (performance and training, and development management).
- Conflict-resolution management skills.

At least two or three of these leadership skills need to be identified in a technical expert for them to be selected / appointed to a managerial position. Most leaders make the mistake of only looking for technical skills, especially when selecting for a technical management position. However, if broader skills are not targeted for an appointment, the selected person might be doomed to fail.

A recent survey by Development Dimension International concluded that 1 in 4 organisations reported a loss in profit due to first-line leader failure. It was further indicated that nearly 60% of their survey participants showed poor first-line management leadership, due to an increased turnover of managers themselves, or their subordinates. Loss of productivity was also reported by 65% of the respondents, all due to poor first-line leadership (Gentry, Logan & Tonidandel , 2014).

This study will help address these issues and will hopefully generate information leading to increased performance of first-line managers/leaders during their transitioning period.

1.3 Problem Statement and Justification

According to the famous leadership school of thought, ‘leaders are made, not born’ (Kors, 2015), and a certain level of knowledge about management theory is required to form a basic foundation before transitioning to a management position. These skills could be used to differentiate between a technical expert who has potential to be a successful leader, and those that will fail. This criterion is vital for selection since many

so-called brilliant/genius technical experts fail after transitioning to management positions.

It is also considered normal that when things become difficult at the strategic management level or in the boardroom; a normal person will want to fall back into their comfort zone. This would result in the current job responsibilities at the strategic/leadership level, not being fulfilled – hence affecting business performance. This would also lead to the new (subordinate) technical expert thinking they are not good enough, since someone who is supposed to be in a senior position is sacrificing his/her strategic/management job for a lesser, but more comfortable job.

1.4 The Aim of the Study

The end goal is to ensure a successful and seamless transition from technical expert to first-line management by outlining the correct criteria used to identify, select, and promote a technical expert to first-line management. Furthermore, the purpose in mind involves examining the common issues and challenges that technical experts are faced with when transitioning to first-line management. Lastly, this research aims to identify the organisational support structures required for newly-appointed managers to seamlessly, and successfully transition.

1.5 Objectives of the Study

1 To examine whether the selection criteria used is sufficient in identifying, selecting, and promoting the technical expert whom will succeed in a management position.
2 To identify and explore the common issues and challenges that technical experts face when transitioning to first-line management.
3 To gauge the effectiveness of organisational support structures and programs currently being implemented at Engen Refinery that facilitates and ensure a seamless and successful transition to first-line management.

1.6 Research Questions

1 What are the current selection criteria being used to identify, select and promote technical experts to the management level?
2 What is the cause of failure for those first-line managers who come from a technical background?

3 Are the currently-recommended support structures effective enough to assist in closing gaps and expediting the transitional process to management?

1.7 Significance of the Study

- Increases awareness of the fact that the failures experienced by first-time managers do not only affect the manager him/herself, but also the staff under him/her, and the organisation's performance.
- Possible review of the selection process, especially regarding the skills set requirement for first-time managers, regardless of whether they were promoted or recruited.
- Possible improvement of the support structures that are designed to facilitate the seamless transition to management positions.

1.8 Scope of the Study

The study will be limited to engineers, laboratory specialists, and first-line technical managers, and high-level technical management within Engen Petroleum – Refinery Division in Durban.

1.9 Expected Limitations of the Study

The study focuses on the private sector. No effort has been made to look at the public sector. Technical experts working in other divisions of Engen petroleum were not contacted as the gate keepers' letter was only limited to the Refinery Division.

1.10 Assumptions

Engen Petroleum utilises a world class recruitment selection process. The current selection process for first-line managers is standardised for all potential candidates across the Refinery Division.

1.11 Definition of Terms

1.11.1 Technical Expert

The Business Dictionary defines an expert as a professional who has acquired knowledge and skills through study and practice over the years, in a particular field or

subject, to the extent that his or her opinion may be helpful in fact finding, problem solving, or understanding of a situation (Business Dictionary, 2016).

Sometimes experts can be referred as ‘subject matter experts’, specialists, and so on. Oxford Dictionary defines a technical expert as someone who is knowledgeable or skilful in a particular field (Oxford English Dictionary, 2014).

To be more specific, the research focus is on the experts who are specialists in technical fields, such as engineers, lab technicians, and operations technicians situated in the oil and gas industry. These workers are highly skilled and well-educated, with lots of experience (as stated in the definition above). They generally rely on their own professional judgement, and highly specialised knowledge and training to perform their work (Rothwell, 2011).

1.11.2 Transition

This refers to the process or period of changing from one state to another. In this case, it is when a technical expert is in the process of changing from a technical career – which mostly requires technical skills, and very little interpersonal skills – to a managerial position, which requires more interpersonal skills than technical skills.

1.11.3 First-line Management

A first-line manager is defined as being the manager directly above the non-managerial workers in a company. They are generally responsible for supervising the production line tasks in the manufacturing business. High-level managers usually depend on them to source important information on workers’ wellbeing (BusinessDictionary, 2016)

1.12 Dissertation Chapters Outline

This study is divided into six chapters, which are briefly outlined below:

1.12.1 Chapter One: Introduction to the study

This chapter introduces the study; it outlines the background, aim, the problem statement and the justification of the study. It also provides the key objectives of the study; the research questions, the scope, the limitations, and the assumptions that are were made during the study.

1.12.2 Chapter Two: Literature Review

This chapter reviews the literature on the subject and points out the shortcomings of arguments. It also highlights the key theories that have been utilised to explain the difficulty of transitioning from technical expert to first-line manager.

1.12.3 Chapter Three: Research Methodology

This chapter explains the tools that have been used to undertake this research. The study has been drawn from quantitative methods. The chapter further outlines the methodology regarding data collection methods used. Data analysis is subsequently explained, and the population and sample size discussed.

1.12.4 Chapter Four: Presentation and analysis of the results

In this chapter, the results of the study are presented in the form of frequency tables and descriptive analysis. This includes graphical representations and descriptions based on the results of the dataset. Statistical analyses are then performed on the data to draw conclusions.

1.12.5 Chapter Five: Discussion

This chapter provides discussion based on the study's research findings.

1.12.6 Chapter Six: Recommendations and Conclusion

Chapter six provides a general conclusion to the study.

1.13 Summary

The calibre of employee that the organisation hires plays a very important role in its competitive edge. Many businesses do not just lose their experienced workers to unemployment or entrepreneurship – they lose them to their competition. Nowadays, businesses do not only compete in terms of the products they sell, or services they provide, but also compete in attracting and retaining the right talent for their business.

Technical expert finds themselves being promoted by organisations purely because the organisation wishes to retain them. It is very important to identify and select the right person to promote to first-line management. This is done by looking closely at the selection criteria that are used during the identification, selection, and promotion process. By doing so, the challenges they face are minimised, and minor skill gaps identified will be rectified by programs that are tailor made for first-line management training.

The next chapter will examine the relevant literature and ground theory on facilitating a successful transition from technical expert to first-line management.

CHAPTER TWO
REVIEW OF LITERATURE

2.1 Introduction

This chapter examines the literature surrounding successful transition from a technical expert to first-line management. Firstly, an overview of the current workforces' generational demographics is outlined, as well as employees' different expectations from the employment contract. Literature on what the main drivers for companies that wants to retain technical employees is subsequently explored. Different employee retention strategies are also discussed.

Furthermore, a brief review of the literature is performed surrounding each of the following research objectives below:

- The ground theory regarding selection criterion used to promote and elevate technical experts to management.
- The challenges and issues that technical experts are faced with when transitioning into first-line management, including those conjunction with the effect transitional issues have on subordinates and the organisation as a whole.
- Existing management development programs that have been introduced by both the business world, and by our case study company, Engen Petroleum.

2.2 The Current Workforce

Generally, a generation can be defined as a distinguishable group sharing birth years. A generation will also share significant life events during their critical growing phases such as common historical or social life experiences, the effects of which are relatively stable over their lives (Kupperschmidt, 2000).

In the context of the workplace, the generation's shared experiences and core values affect a person's feelings toward: authority and organizations, what a person desires from work, and how he or she plans to satisfy those desires (Jurkiewicz, Masset & Brown, 1998). As such, it is important that managers understand these differences as they could have an important impact on attraction, recruitment, motivation, productivity and retention of employees (Mahoney, 2015).

The current workforce within the industry is mainly dominated by the three generational groups. These are the baby boomers, generation-x, and generation-y (Lu & Gursoy, 2013). However, according to (Smola and Sutton, 2002), over the years the ratio and the influence that the three generations have in the workplace has changed. Managing a workforce consisting of newly-entering generation-y, generation-x, and the retiring baby boomers is a huge challenge (Rodriguez, Green & Ree, 2003).

Some of the generation-y members are no longer at the beginning stage of their careers. They are moving into the middle stage, which is usually first-line management. A number of researchers have found that the younger and older employees prefer more diverse management styles (Lu & Gursoy, 2013).

The main focus of this study was on the employees from generation-y and generation-x, the main reason being that most of the generation-x members are now in first-line management positions. Some are already moving into senior management. Generation-y members are starting to move into first-line management positions. Both these generations have different characteristics and different expectations from their jobs and career growth.

Generation-x members were born between 1965 and 1980 (36–51 years of age), and their main characteristics and work expectations relate to emotional security, independence, informality, and entrepreneurship (Abib-Pech, 2013). They are also perceived as having higher rates of organisation commitment, as opposed to generation-y. They are also seen as high-level performers (Lu & Gursoy, 2013).

Generation-y members were born between 1981 and 1999 (17–35 years of age), and their main characteristics and work expectations relate to being accepting of change, technical-savvy and environmentally-aware (Abib-Pech, 2013). They are often not afraid to ask for promotions or an increase within a few years of starting in their position. They tend to communicate easily, are comfortable with social media, and consider work-life balance to be very important (Lu & Gursoy, 2013).

It was found that both generations prefer a protean-type employment contract. This type of employment cares less about job security and loyalty to one company, and

more about employability. They care more about their capability of being employed by another company if an opportunity reveals itself (Clarke & Patrickson, 2008).

The technical experts transitioning into first-line management in this study fall within the three generations mentioned above, most being in the generation-x and generation-y group, as the baby boomers are at retiring age (Lu & Gursoy, 2013).

Although the generational comparison is not the main focus of our research, it was important to highlight the type of workforce being dealt with, especially in terms of their expectations from a working environment. This allows a better position to devise the effective programs and interventions best suited to these generations.

2.3 Why Retain, and How?

Retention is a voluntary move made by companies to create an environment conducive to employees' long-term engagement (Bansal, 2014). There are many reasons why a company would want to retain their technical experts, which are: keeping the scarce skills within the company; and preserving the comprehensive experience and technical knowledge the experts have attained, and which may be of great value to the company, especially trade secrets (Rothwell, 2011). Lastly, in certain companies, technical experts are kept within the organisation to sustain or maintain a good company's Broad-Based Black Economic Empowerment (BBBEE) status (Patel & Graham, 2012).

Technical experts are workers of a special calibre which cannot be sustainably retained in the traditional type of career management. These individuals have the capability to take charge of their careers and employability (Clarke & Patrickson , 2008). Hence, it is advisable for companies to come up with solution that will provide mutual benefits to both the company – by sustaining the skills and abilities within the company – and the employee – by having a clear career progression route for those employees whom are in possession of critical skills.

A company cannot simply expect to retain all employees. Rather, they need to clearly identify objectives for retention. The company then needs to identify the skills and

'linchpin' positions to retain in order to achieve their objectives (Conger & Fulmer, 2003).

The people who possess those critical scarce skills and have the potential to move into first-line management positions should then be enrolled into a management development program. This is one of the retention strategies used by companies to keep technical experts within the company: by promoting or elevating them to first-line management (Bansal, 2014).

In some cases, technical experts may grow bored with their jobs as soon as they have mastered their day-to-day routine. As soon as they feel that their work has reached a dead end, they will want to move on. It is the duty of the company to ensure that its intellectual property, which these technical experts possess, is protected. Some of the ways companies do this are listed below:

- Companies will sometimes go up to the extent of increasing responsibility and complexity in technical experts' work in order to retain them, before resorting to promotion to a management position (Winiarska-januszewicz, 2014).
- Companies also spend a lot of money on training and capability development programs for their employees, especially those in technical careers (Gurdjian, Halbeisen & Lane, 2014). It therefore makes sense to retain the technical personnel in order to retain the skills and knowledge within the company by promoting him/her to a job with more responsibility, and which may be more challenging than the previous one.
- Another motivation to promote technical experts is the huge cost savings on the recruitment process. Promoting someone within the company is more cost-effective compared to the expense of recruiting externally (Marinescu, 2014).
- Technical experts may also aspire to move into management positions since, usually, a management position rewards them with higher pay and more benefits.
- In some cases, technical experts get promoted to management positions simply for the sake of sustaining or increasing the company's BBBEE score, thereby boosting the company's competitive advantage. This will increase the company's

chances of doing business with the Government – every company's biggest customer (Horwitz & Jain, 2011).

Although there are other retention strategies, the promotion strategy is usually the most widely-preferred strategy for retaining technical experts in businesses (Martin & Schmidt, 2010).

Once the employee has been promoted to management, they receive a new package which will consist of more rewards and benefits. This is exciting for the new manager, but the position also comes with more challenges due to the new responsibilities, including people management, which requires different sets and levels of skills, knowledge, and capabilities (Cappelli, 2000). This is the main reason companies need to ensure that the correct selection criteria are set and adhered to when identifying and selecting a potential technical expert to promote to first-line management.

2.4 Selection Criteria

The selection criteria are vital since companies might have a number of technical experts that are successful in their careers, but some of them may not have the qualities needed to become a leader. For this reason, it is crucial that they choose the *best suitable candidate*. On the other hand, it would also be regrettable to see a previously successful technical expert failing in their first-line management position (Plakhotnik, Rocco & Roberts, 2011).

According to Martin and Schmidt's research on leadership transitions, nearly 40% of the internal appointments of employees who were identified as high potentials end in failure (2010). Hence it is important to discuss factors that could be used to identify and select the technical expert most suited to first-line management. These factors are as follows:

1. Educational qualifications.
2. Technical knowledge.
3. Job previously held and the relevant skills and abilities employed in that position.

4. Number of years of experience with the company, and seniority amongst a group of fellow experts.
5. BBBEE requirements.

2.4.1 Educational qualification

Based on the definition of technical expert highlighted in the introductory chapter of this research, a technical expert is a “professional who has acquired knowledge and skills through study and practice over the years” (BusinessDictionary, 2016 np). Technical experts are expected to be highly qualified people, and therefore education and qualifications form one of the most important factors to consider during selection for first-line management. Gupta also states that education level and level of managerial experience can affect the span of control of a manager (2010). Contrary to this, Plakhotnik et al. suggest that no amount of academic preparation and on the job observation can provide adequate preparation to ensure success in management (2011).

2.4.2 Technical knowledge

Technical experts are a vital resource for the organization as they “possess key institutional memory and tacit knowledge” that will gradually evaporate with every resignation or retirement (Rothwell, 2011:pg12). To ensure continuity and company sustainability, technical experts are often promoted to management. Technical knowledge should constitute part of the selection criteria for both technical and managerial positions (Moonen, 2011).

2.4.3 Scarce skills and abilities

The more experienced a technical person, the higher the probability that they would leave the company for greener pastures. It is logically sound for a business to want to retain the person within the company. Some technical skills are very scarce, and once a technical expert has been lost to another company, it may take months to source or train another person to perform with the same level of skills and competencies (Samuel & Chipunza, 2009).

2.4.4 Seniority and experience

Some technical experts possess vital knowledge about the company. If that person is head-hunted by another company, the original company's trade and competitive secrets may be at risk (Rothwell, 2011). The number of years a position is held within the company is also an indicator that the technical expert is loyal and committed to the company, therefore considering them for first-line management can be thought of as some form of reward for their loyalty and commitment. Companies need to incorporate seniority and experience as one of the important factors for selection.

2.4.5 BBBEE requirements

In South Africa, the introduction of the affirmative action and employment equity policies revealed a huge shortage of black professionals in technical careers, let alone those in the 'expert stage' of technical careers whom are considered for promotion to first-line management.

The labour market is highly unionised, unions being highly involved in recruitment processes of many companies. It is important for a company to retain the small portion of black technical professionals they have within the company, and also to be able to attract new ones. The BBBEE act also plays a vital role in motivating and enforcing the companies to have a fair representation of race in their management positions and business ownership (Patel & Graham, 2012; The Presidency, 2004).

The ultimate goal is to ensure that organisations can identify who "is ready now" and who is "on track" for larger leaderships roles. Managing this identification and making sure the talent pool is aligned with organisational needs is the greatest challenge for talent management in today's economy (Winiarska-januszewicz, 2014).

2.5 Challenges that Hinder Successful Transitioning to Management Positions

The newly-appointed first-line managers from a technical expert background face a number of challenges simply because of their employment origins. Most technicians work in isolation and execute duties on an individual basis. This is completely different to management duties, whereby a different set of skills is required. This set of skills forms part of the shortcomings that contributes to technical experts not being successful, or having a delayed transition to management (Bakken, 2006). Ferry says

that the management attributes required do not simply come into existence, but develop over time during a person's career (2015).

It is not only technical or professional knowledge that is required for the success of a business. It may be important, but it is not sufficient, and hence technical experts transitioning to management need to acquire managerial skills in order to be successful in a first-line management position (Leite, 2010).

Figure 2.1 below illustrates Mintzberg's ten management roles as being grouped into three main categories (Moonen, 2011):

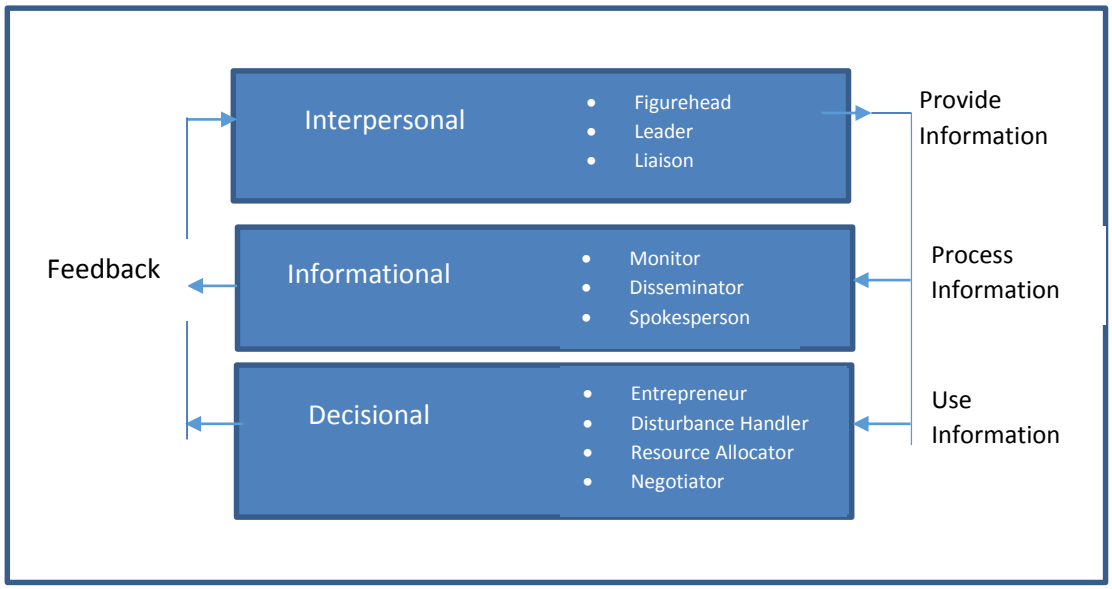


Figure 2.1: The ten managerial roles (*Source*: Moonen, 2011:1-14)

Figure 2.1 suggests that every manager will have to embody each of the outlined roles. These managerial roles are grouped into three categories: interpersonal, informational, and decisional. They are discussed in detail below:

2.5.1 Interpersonal - Figurehead, Leader, Liaison

People are the most valuable resource of any enterprise, and managers need to know how to lead them. Forming the body of the interpersonal skills managers need to have:

1. *Influencing and motivation skills*: A first-line manager needs to possess the skills to motivate and influence their subordinates (Ferry, 2015). One of the key success factors also includes developing trust in and reliance on subordinates,

colleagues, and other key stakeholders. It is always good to establish good support networks of colleagues within and outside the organisation (Eiser, 2008). Therefore, interpersonal skills are essential for every level of management.

2. *Delegation of work:* The manager's role is to get the work done through others, but most technical experts found it difficult to shift responsibility to their subordinates. The greatest danger of not being able to delegate, is that it leaves very little time for strategic thinking because the manager's focus is always on little tasks which can easily be executed by subordinates (Bakken, 2006). Zidle also puts an emphasis on first-line managers avoiding technical projects by all means – they could be easily tempted back into their comfort zone, which may lead them to neglect their managerial role (2012). As Parish says, "People will do great things if they are just allowed to get on with it by managers who have their employees best interests at heart" (2013:6).

3. *Performance management, and training and development management:* Managers need to be able to motivate staff to perform at their best, and also be willing to learn and grow within their careers (Bakken, 2006). If one encounters a non-performer, as a manager, one needs to be able to give constructive feedback to them so that they are made aware of their non-performance, and so they can look into improving performance. Managers also need to give positive feedback more often where it is due, in order to keep their staff motivated.

2.5.2 Information roles – Monitor, Disseminator, Spokesperson

1. *Effective business writing and presentation skills:* Communication plays a vital role to the success of a first-line manager. First-line managers need to be able to communicate to their subordinates, peers, and their seniors. Since first-line managers are usually found amongst the middle managers of the organisation, they need to be able to pass on the business strategy from higher to lower management levels, and to also ensure that the strategy is executed. They have to meet the expectations of their subordinates, and ensure that they pass on their concerns to management. On the other end, top management also

have their demands and expect optimal productivity. This means the first-line manager is caught in-between two levels of management, handling twice the amount of responsibility – one of the main causes of their failure (Plakhotnik et al., 2011).

2. *High level reporting* also forms part of the first-line manager's role. The new manager will be expected to write and present reports to different stakeholders within different management levels of the organisation.

2.5.3 Decision-making Role

These skills directly affect the results of the manager, but they can be taught through training (Moonen, 2011).

1. *Entrepreneur:* First-line managers are expected to do financial management of their department (budgeting, cost center management etc.).
2. *Conflict resolution management: O*ne of manager's roles, as stated by Mintzberg, is being a 'disturbance handler' (Moonen, 2011). Most technical employees have a high level of problem solving skills, but a management level involves people skills. It should be fairly easy to develop conflict management skills. Managers need to be able resolve work conflicts, communicate, and work with people efficiently (Miller, 2006). Conflict can be a healthy enabler of growth for one's business, and enable professional growth for all people involved. Effective leaders know that the most authentic relationships with their employees, clients, and external partners don't truly begin until they experience some form of tension (Llopis, 2014).

3. *Allocate resources: This involves allocating funding, as well as assigning staff and other organizational resources* (Moonen, 2011). Bakken also supports the idea that a role embodied by all managers is to allocate resources (2006).

Mintzberg's ten roles of management can be applied as a point of reference when developing managerial skills, but one must remember that not all of them can be fulfilled at the same time. It should instead be considered a learning journey that all managers need to embark on (MindTools, 2016).

2.6 The Impact of a Failed Transition

Management has been defined as the process of communicating, coordinating, and achieving action in the pursuit of organisational objectives (Clegg, Kornberger & Pitsis, 2011). Managers at all levels contribute towards the success of an organisation but most of the abovementioned crucial roles form part of the first-line managers' responsibilities, most of them being first-time managers (Plakhotnik et al., 2011). A failed transition has an effect on many different levels, as discussed below.

2.6.1 Impact on Individuals

An individual who is promoted is not only a manager of himself/herself but also a manager of his/her subordinates, effectively, their ex-colleagues. The new manager needs to make sure that their subordinates are motivated and performing at their best. He/she will also be responsible for their development within the company. The new manager would need to avoid micro-managing their subordinates, as this could limit development of direct reports, and can also lead to resentment and complaints (Eiser, 2008).

2.6.2 Impact on the Department and Subordinates

Quality of the departmental work is impacted and will need to be tracked closely if the new manager is not coping (Eiser, 2008).

2.6.3 Impact on the Company as a Whole

A new first-line manager may fail to envision the bigger picture in order to support the organisation as a whole. This is important perspective to have in order to correctly prioritise and be able to identify the tertiary effects of the tasks on their department list. Plakhotnik, Rocco & Roberts claims that one of the most difficult and challenging things to do is to transition from the technical expert field to first-line management (2011). This challenge brings many predicaments that first-line managers may not be prepared to deal with, and may also receive poor support from the organisation. As a result, first-line managers usually reach their performance plateau within the first 3 months of their new job (Sutton, 2008). Nearly 50% of first-time management transitions end up in failure (Ameson, 2005).

Talent management is widely used by most companies to identify the potential employees to be developed for leadership positions, starting from self-managers to the level of CEO, where entire companies are managed (Casademunt, 2016). Through talent management, a company is able to develop a pool for management talent, often referred to as a 'leadership pipeline', comprised of employees that are lined up for management (Winiarska-januszewicz, 2014). According to Winiarska-januszewicz, in order to accelerate those with high potential, a leadership development program is should be integrated into the leadership pipeline, and supported by the Individual Development Plans (IDPs) (2014). This is made possible by the framework of the '70-20-10' rule as depicted below:

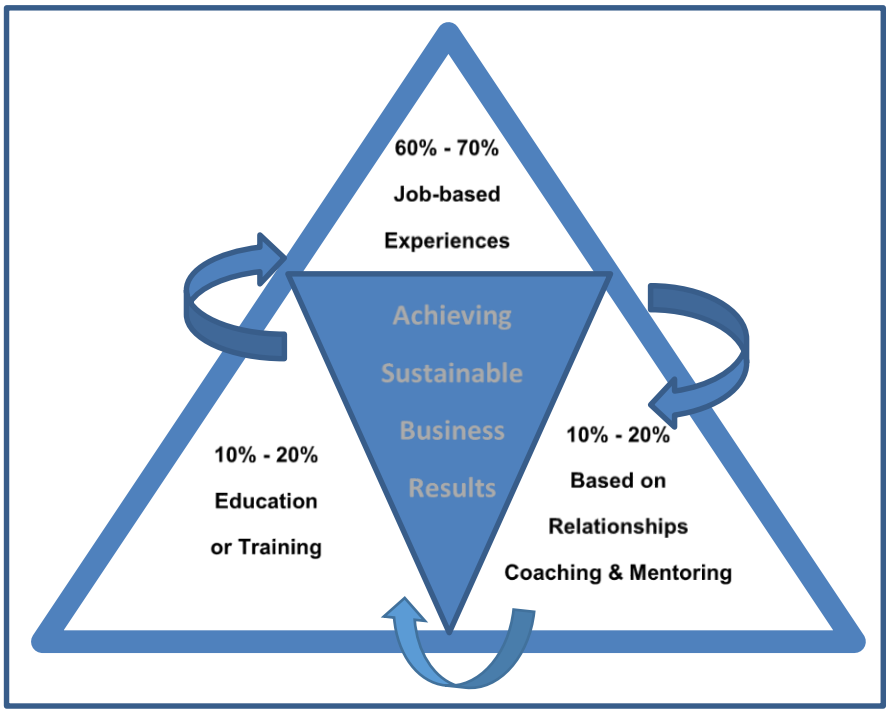


Figure 2.2 70-20-10 Learning Rule (*Source*: Winiarska-januszewicz, 2014:17–25)

Figure 2.2 above shows one of the frameworks identified by Winiarska-januszewicz which suggests that the advancement of one's leadership pipeline can be done through the development of high-potential employees (2014). The job-based experience (70%) is suggested as the focus of the transition to leadership. The remaining 30% can be split up into two: 10-20% on classroom education or training, and 10-20% based on relationship coaching and mentoring.

This model strongly communicates that the job-based experience is the most important form of intervention in assisting with a seamless transition from technical expert to first-line management. On-the-job experiences, coupled with coaching and mentoring by a senior employee, would work well as a support structure for a first-line manager. When they experience difficult circumstances, they will know where to find guidance and advice.

Education and training is also vital for gaining new knowledge not yet known, except by people already in the management field.

2.7 Programs within Engen Petroleum

One of the research objectives was do a brief overview of *Engen Petroleum*'s leadership development programs and interventions that target first-line manager's development. Some of the programs are designed only to consider technical experts transitioning into management, and some involve employees from all fields (technical and non-technical included). These programs are as follows:

- Accelerated Capability Development (ACD) Program
- Management Development Program
- Senior Management Development Program
- Masters of Business Administration
- Coaching and Mentorship Program
- SAPIA Advanced Certificate Management (ACM) Program

An inquiry regarding these programs is included in this research's survey, the effectiveness of each program was analysed, and the results presented and discussed in Chapter 5. Literature regarding said programs is discussed below.

2.7.1 Accelerated Capability Development Program (ACD)

This is one of the programs Engen uses to assist technicians/technical experts in transitioning to management positions successfully. The program originated from their parent company, Petronas, which is situated in Malaysia. Figure 2.3 below outlines the Accelerated Capability Development (ACD) Program, as modelled by Petronas.

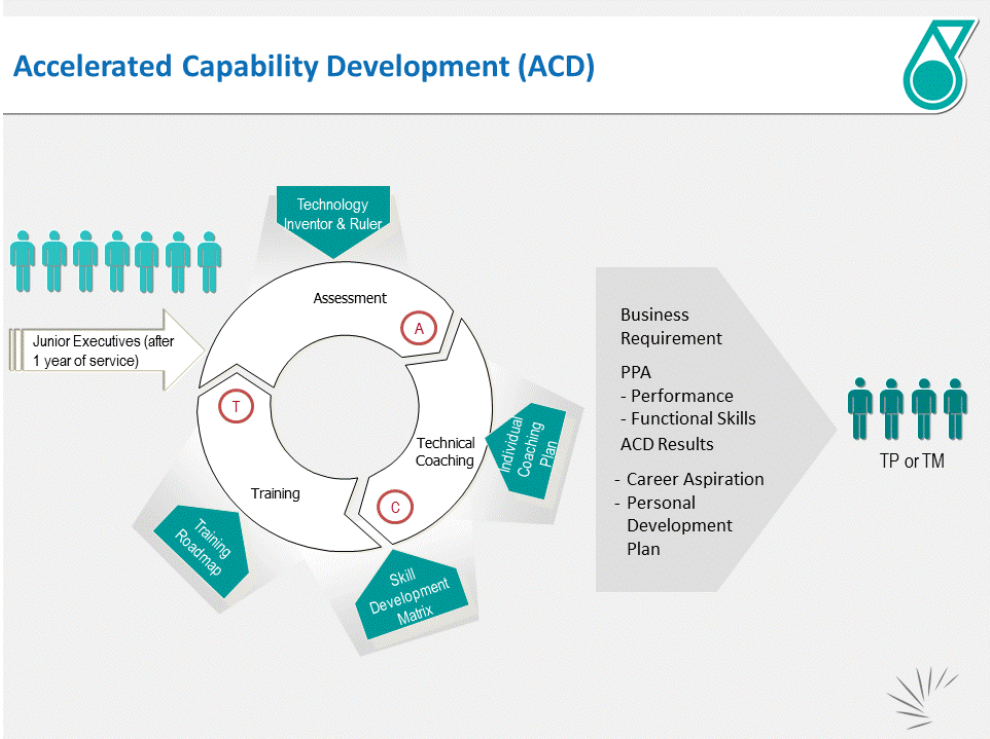


Figure 2.3 Accelerated Capability Development Program **(***Source*: EngenRefinery, 2012)

The ACD program shown above is tailor-made to facilitate technical staff such as Engineers, Operations Technicians, Analytical Chemists, and Environmentalists. The program was introduced to Engen in order to accelerate development of competent, independent petro-technical staff. The ACD program also served to align the engineers' development in parallel with Petronas engineers' progression route (EngenRefinery, 2012).

The program offers the engineers the choice to either take a Technical Professional (TP) or a Management career path. It is applicable to Junior, Process, and Senior Engineers

The program was designed to provide mutual benefits for both the technical staff and the company. The company is able to retain the critical skills that it requires to stay competitive, and the technical employees are able to achieve their career aspirations, whether that be moving towards becoming technical professionals, or towards management careers. Employees also have the option to change their route any time during their career: either moving back to a technical profession, or moving from a

technical profession to management. The engineer progression route as per ACD Program is outlined in Figure 2.4 below.

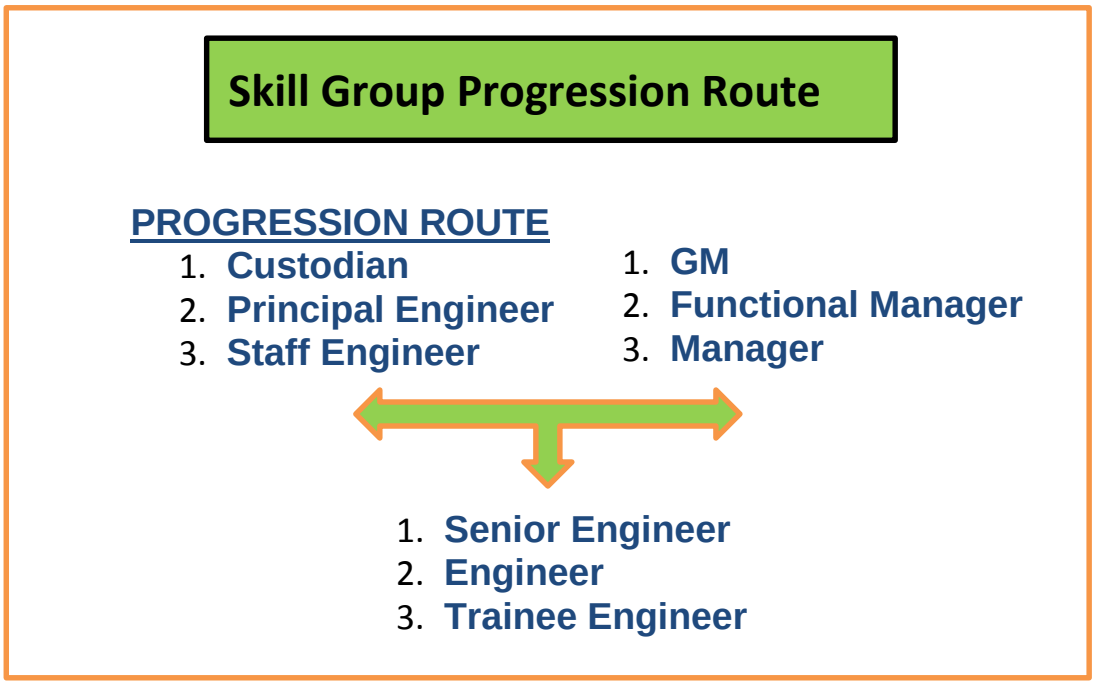


Figure 2.4 Skill Group Progression Route (*Source*: Engen Refinery, 2012)

The progression route outlined above is integrated into the ACD program. It allows engineers, newly graduated, to progress from trainee engineer position, up to senior engineer positions. At that stage, the employee is considered a technical expert. When an employee reaches this level, they can choose their path in accordance with their career aspirations. One can either take the technical route, or the pure management progression route, which could take one to General Manager (GM) or even the Chief Executive Officer (CEO) level.

It is also important to note that both progression routes chosen after the senior engineer level require a certain level of leadership capabilities, since both the Technical Professional and Technical Manager positions will entail having employees under their supervision.

2.7.2 Engen Leadership Program (technical and non-technical employees)

Like any other company, Engen Petroleum has its own talent management program. The refinery requires many experienced technical experts; hence part of the talent

management process is being able to identify critical positions within the company. Each critical position has a detailed succession plan, and has at least more than two high potential employees that are lined up and equipped to take over the position should anything happen to the holder.

Figure 2.5 below illustrates the Engen Leadership Development Framework that Engen uses to develop employees transitioning to differing levels of leadership.

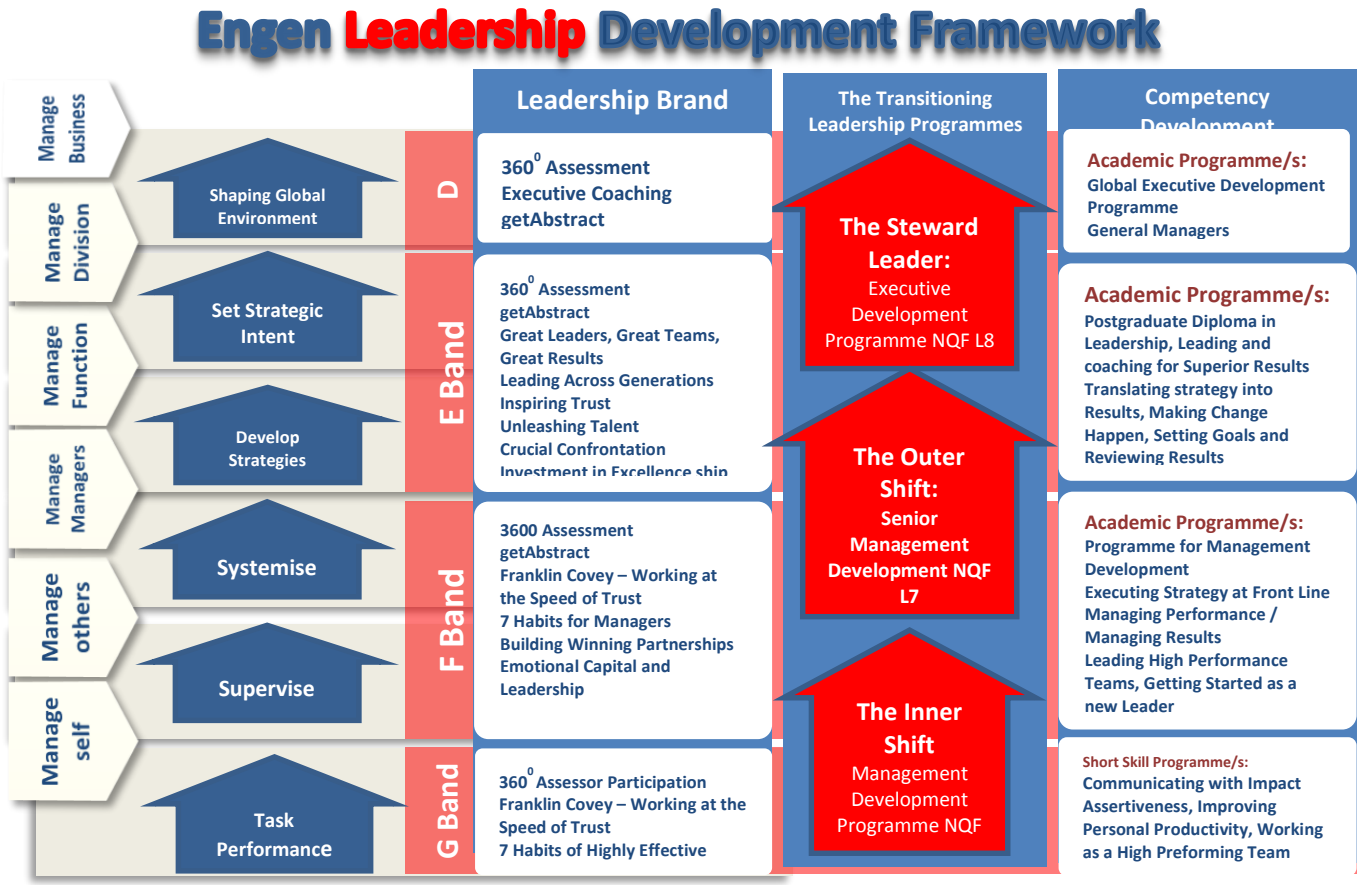


Figure 2.5 Engen Petroleum Leadership Framework (*Source*: Engen Petroleum, 2015a)

There are a number of programs that incorporated into the framework shown in Figure 2.5 above. For the purpose of this research, the focus will be only on the two sections: 'manage self', and 'manage others'. According to the above framework, the skills required at this level are to: drive task performance, be able to supervise, and be able to systemise.

2.7.3 Management Development Program (MDP) and Senior MDP

These programs form part of the programs identified by the framework in Figure 2.5 that could assist technical experts and other non-technical employees in transitioning to first-line management. They are the Management Development Program (MDP) at a lower supervision level, and Senior Management Development Program (SMDP) at a higher level of middle management.

2.7.4 South African Petroleum Industry Association (SAPIA) Advanced Certificate in Management (ACM) Program

The ACM program for oil and gas is a management program targeted at middle managers with an NQF Level 8 qualification. This is an initiative by the South African Petroleum Industry Association (SAPIA) to assist managers whom require specialist knowledge in the oil and gas industry.

"The programme builds and impacts the delegates' petroleum knowledge; petroleum technical understanding; leadership capabilities and driving a high performance culture; governance understanding and how it impacts the petroleum industry" (SAPIA, 2016).

2.7.5 Enrolment to Soft Skills Courses

Soft skills courses, especially regarding *e*ffective communication, conflict resolution, impactful presentations, emotional intelligence, assist a new leader in sharpening his/her soft skills, and do not necessarily require a formal program. Two to three day courses are effective enough if coupled with practical experience soon after the course has been attended.

Developing and executing strategy at first-line management, managing performance, managing results and leading high performance in teams also constitute the material of available soft skills courses that first-line managers can enrol in, as per the framework outlined in Figure 2.5.

2.7.6 Mentor and Mentee program

Mentorship refers to an individual developmental relationship in which a more skilled or knowledgeable person guides a lesser-skilled or less knowledgeable employee. A mentor can be a person of any age, but should have a certain area of expertise (EngenPetroleum, 2015b).

As Conger and Fulmer emphasise, “company leaders also make periodic progress checks and may send the employee to a training program or appoint a mentor (not the employee’s boss) to give hands on guidance” (2003:4).

2.7.7 Master of Business Administration(MBA) or Master of Business Leadership (MBL)

These two programs form part of the transition to a senior manager level as per Engen’s leadership framework, but some of the technical experts transitioning to first-line management within Engen have already enrolled, some even having completed these programs, regardless of their position within the company.

First-line managers are encouraged to take leadership programs or courses such as an MBA or an MBL in order to assist the new leaders in building their leadership capabilities and sharpening their leadership skills. These skills also assist in improving the first-line manager’s confidence.

Mintzberg’s critique of MBA programs is that “management is a practice”. These managerial roles cannot simply be learned in a passive, educational environment. The only chance to learn and improve one’s managerial skills is when one is given an opportunity to share one’s involvement and experience with other managers in the hopes of lighting on interesting concepts (Goossen, 2004).

2.8 Summary

This chapter discussed a brief literature review of successful transitioning from technical experts to management. First, the type of workers under examination, technical experts, were defined and discussed. Subsequently, the importance of companies retaining technical experts was explored. The chapter also discussed different types of retention strategies that could be used, promotion being the most-used retention strategy. Selection criteria were discussed extensively, and the challenges that hinder the success of first-line managers with technical backgrounds were examined. Lastly, programs that are implemented by different companies, chiefly including Engen Refinery, were discussed. The next chapter discusses the research methodology used during the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This research follows a descriptive approach – undertaken in order to "ascertain and be able to describe the characteristics of the variables of interest in a situation" (Sekaran, 2003:121). The research design makes use of a quantitative research design method. The survey questionnaire is the only tool used for data collection. The survey format has been chosen due to it being a convenient way to collect and analyse data. Research was conducted on employees at Engen Refinery in Durban, as per gatekeeper letter terms and conditions.

3.2 Purpose and Objectives of the Study

The purpose of the study is to ensure a seamless transition from a technical field to a managerial one by ensuring that the correct criteria are used to identify, select, and promote a technical expert to first-line management. The purpose, furthermore, is to conduct an examination of the common issues and challenges that technical experts face when transitioning to first-line management. Lastly, the study aims to identify organisational support structures and programs required for the newly appointed managers to make a seamless, successful transition.

Objectives are:

1. To examine whether the selection criteria used is sufficient in identifying, selecting, and promoting the technical expert whom will succeed in a management position.
2. To identify and explore the common issues and challenges that technical experts face when transitioning to first-line management.
3. To gauge the effectiveness of organisational support structures and programs currently being implemented at Engen Refinery that facilitates and ensure a seamless and successful transition to first-line management.

3.3 Location of the Study and Target Population

Engen Refinery in Durban is used as the location of study due of easy access to various, if not all, of the managers and supervisors there that previously held technical

expert positions. The areas of focus are the engineering, laboratory, safety, environmental, operations, and maintenance departments. Engen Petroleum may also benefit from the outcome of this research, since they have a number of technical experts with the potential to be promoted to management positions. This has also been stated on the gatekeeper's letter.

The Refinery division situated in South Durban has the most employees with a technical background within the whole of Engen Petroleum. The target professions are situated in the engineering, laboratory, safety, environmental, operations and maintenance departments. These departments consist of about 90% engineers and technicians. The target population consists of 101 employees whom are middle managers and supervisors within the aforementioned technical departments.

Survey questionnaires were distributed via email for the employees whom have easy access to computers with an internet connection. Some were printed and distributed physically to respondents if they did not have easy access to computers with an internet connection.

3.4 Research Design and Rationale

The research design used is quantitative research, with an additional open-ended question.

Creswell defines quantitative research as "a means for testing objective theories by examining the relationship among variables. These variables in turn, can be measured typically on instruments, so that numbered data can be analysed using statistical procedures" (2009:4).

3.5 Sampling Techniques

A stratified random sampling method was used during sample selection. Employees are categorised by departments and the positions they hold, for example: Maintenance Line Managers, Engineering Manager, Operations Supervisor, and so on. Subsequently, a random selection was made from different strata. If a department had less than 10 employees, all employees in that department were selected to participate in the survey. All female employees within the targeted population were selected to participate in the survey since there are very few of them in the technical field.

3.6 Sample Size

The population was equal to 101 employees, consisting of all Engen Refinery managers and supervisors within technical departments. The sample size for 101 people with marginal error of 10% was calculated at 55 employees.

3.7 Research Instruments

3.7.1 Survey questionnaire

The nature of the study was based around quantitative research. The question responses were based on a Likert scale wherever possible. The questionnaire sections were outlined in the order of the three objectives of this research.

3.7.2 Questionnaire Design

The questionnaire consists of a collection of questions put in such a way that they collect relevant and appropriate information, forming the bases of analysis for a particular study being conducted. It has been used in both qualitative and quantitative studies, and depends on the nature of questions. Some of the examples of the types of studies where a questionnaire has been used include survey research, experiments and other modes of observation. The questions are structured in-line with the objectives or the variables of the study in order to draw appropriate conclusions from the responses (Acharya, 2010).

There are two types of questionnaires, namely structured and unstructured. If a combination of these two questionnaires is used, it is referred to as quasi-structured questionnaire. Structured questionnaires include pre-coded questions with well-defined skipping patterns to follow the sequence of questions. Most quantitative data collection operations use structured questionnaires.

A structured questionnaire was used in this study because there are less discrepancies, it is easy to administer, there is consistency in answers, and easily facilitates for data management (Acharya, 2010).

The survey questionnaire also had one open-ended question for each objective so as to give participants an opportunity to share their point of view with regards to a particular objective.

Online surveys were created, distributed through *Questionpro*, and emailed. The printed survey was created in *Microsoft Word*, and the feedback captured manually into *Questionpro* for analysis.

3.8 Logistical and Ethical Considerations

The confidentiality of all participants is upheld, and all data used is kept confidential at all times during the research. Data was kept during the study on a personal computer which is password protected.

3.9 Data Reduction and Analysis Process

Data reduction includes summarizing and simplifying the data collected and/or selectively focusing on some parts of said data. The aim of this process is to transform the data and condense it. Different methods exist for summarizing data such as coding, categorizing data, and then constructing a narrative (Saunders, Lewis & Thornhill, 2009).

After collecting data through a survey tool, *Questionpro*, raw data was downloaded and transformed into a *Microsoft Excel* spreadsheet format, and *Microsoft Excel* was used to perform the analysis. The data was coded and categorized so that it would be easy to perform a statistical analysis.

The analysis process was handled through frequency distribution statistics, and the data was analysed through descriptive statistics, including: frequency distributions, means, variance, and standard deviations and Pearson's Chi-square test.

- Frequency distribution (table) is the simplest way of summarising data for individual variables so that specific values can be read. For categorical data, the table summarises the number of cases (frequency) in each category (Saunders, et al., 2009).

- The mean usually know as average is the most frequently used measure of central tendency.

- The variance, or more usually, the standard deviation describes the extent to which data values differ from the mean, data should be normally distributed in order to calculate the variance or the standard deviation.

- A Chi-square test is designed to analyse categorical data, and it is meant to test the probability of independence of a distribution of data

The quantitative results were displayed in tables where data was presented and summarised. Results were also graphically presented using pie and bar graphs. Subsequently the results were interpreted, discussed, and the research questions addressed.

3.10 Data storage and maintenance

Data was collected via *Questionpro* survey software as mentioned earlier on in this chapter. To ensure confidentiality of data as per the university policy, the software employs an authentication tool – login and password – so as to ensure only those authorised can gain access to the data during the analysis stage.

After the data analysis phase, data will be handed back to the University of KwaZulu-Natal (Graduate School of Business and Leadership), so they can ensure the safety and integrity of the dataset. The university policy also states that data on which any research publication is based should be retained within the institution for at least five years after publication, thereafter the university will be responsible for doing the appropriate backups and archiving policies that may apply.

3.11 Validity and Reliability

Validity focuses on whether the research is reasonable, at the same time positing what it is intended to go under evaluation. Reliability refers to the consistency, dependability and replicability of the results obtained from a research.

Within this research survey's questionnaire, each objective had several quantitative questions and one qualitative question. This was done to enable the triangulation methods used to ensure data validity and reliability.

3.12 Summary

This research methodology chapter reiterated the purpose of the study, its objectives, and the location of the study. Target population, sampling techniques, and participants' recruitments strategies were also discussed. The research instruments used for data collection were mentioned, and information regarding the collected data – the data reduction process, data storage and maintenance – was also discussed.

The next chapter outlines and discusses a brief analysis of the data collated from the research conducted.

CHAPTER FOUR

Presentation of Results

4.1 Introduction

In this chapter, data will be presented and analysed as descriptive and inferential statistics. These will include frequency distribution tables and figures, narrative text, means, variance, standard deviations and Pearson's Chi-squared test.

4.2 Demographic Data Analysis

Table 4.1 shows the demographics of the population, categorised by participants' generation (generation y, generation x, and baby boomers) as discussed previously.

Demographic data table for total of 55 participants (N = 55)

		Generation Y (9)		Generation X (19)	Generation X / baby boomers (27)	
		25-29	**30-34**	**35-40**	**41 and above**	**Row Totals**
Gender	**Male**	**1**	**5**	**15**	**26**	**47**
	Female	**0**	**3**	**4**	**1**	**8**
Race	**Asian/Indian**	**0**	**3**	**3**	**13**	**19**
	African	**1**	**5**	**14**	**10**	**30**
	Coloured	**0**	**0**	**1**	**2**	**3**
	White	**0**	**0**	**1**	**2**	**3**
	Other	**0**	**0**	**0**	**0**	**0**
Technical Sector **Other** **Operations 9** **Laboratory 2** **Quality 1** **Process Control 1**	**Engineering**	**1**	**8**	**14**	**19**	**42**
	Information Technology	**0**	**0**	**0**	**0**	**0**
	Other	**0**	**0**	**5**	**8**	**13**
Years in Technical career?	**Less Than 5yrs**	**0**	**0**	**1**	**0**	**1**
	6 - 10yrs	**1**	**8**	**3**	**1**	**13**
	11 - 15yrs	**0**	**0**	**13**	**2**	**15**
	16 – 20yrs	**0**	**0**	**2**	**8**	**10**
	Above 20yrs	**0**	**0**	**0**	**16**	**16**
Years in the management position?	**Less Than 1yr**	**0**	**0**	**1**	**1**	**2**
	1 - 3yrs	**1**	**8**	**9**	**4**	**22**
	3 - 5yrs	**0**	**0**	**5**	**4**	**9**
	5 – 10yrs	**0**	**0**	**2**	**10**	**12**
	Above 10yrs	**0**	**0**	**2**	**8**	**10**

Table 4.1 Participants' demographic data

The targeted population consists of 101 employees from Engen Refinery, and all participants were either in middle management, or were supervisors within the selected technical departments. As mentioned previously, these departments were Engineering, Process Technology, Laboratory, Maintenance, Environmental and Operations. The calculated sample size for 101 people with marginal error of 10% lead to a sample size of 55 employees.

All the employees selected as part of our sample in the targeted population were provided with the survey questions either via email, or were given manually-printed survey forms. A total of 55 employees responded to our survey.

There were 89 males in our targeted population, and 47 responded, which is 53% response rate. In the males' group, 6 were generation y, 15 were generation x, and 26 were generation x / baby boomers (above 41 years of age).

Since females are still a minority within the organisation, especially in the technical fields, all females in the targeted population formed part of our sample size and were invited to participate. Only 8 out of 11 females participated in our survey that is 72% response rate, 3 were from generation y, and 5 were from generation x.

See Figure 4.1 and 4.2 below showing participants by gender, and participants by age and gender respectively.

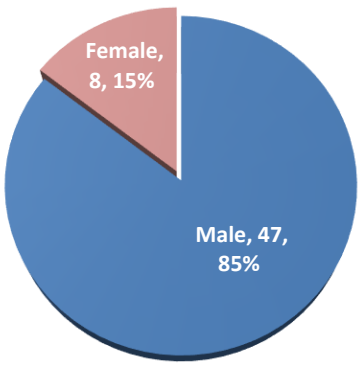


Figure 4.1 Participants by gender

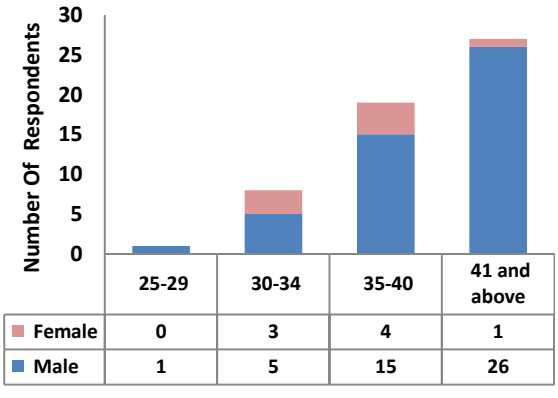


Figure 4.2 Participants by age and gender

- An interesting observation noted during the research, as illustrated in Figure 4.1, is that the technical environment is still male-dominated, hence the reason why 47 out of 55 participants were males.
- Our participants were 85% male vs. 15% female. The number of females within the organisation increases as the age becomes younger, as illustrated in Figure 4.2 above, with the exception of the 25–29 age groups. Considering that the first-line management level takes years to reach, few people have achieved a promotion to this position by this age. A typical person starts their careers at this age, having to be promoted to first-line management after years of experience.
- The race breakdown was as follows: 30 Africans, 19 Asians/Indians, 3 Coloureds and 3 Whites. Observation was that there were no whites and coloureds in the younger generation (Less than 35).

4.3 Selection Criteria Used to Promote to Management

This section's objective was to examine if the selection criteria used is sufficient to identify, select and promote a technical expert whom will succeed in a management position?

4.3.1 Means of Elevation to First-line Management Position

How were you elevated to your first management position?		
	Frequency	Percentage
Promoted	**22**	**40%**
Position advertised internally	19	35%
External appointment	9	16%
Other	5	9%

Table 4.2 Participants' response on elevation methods to management

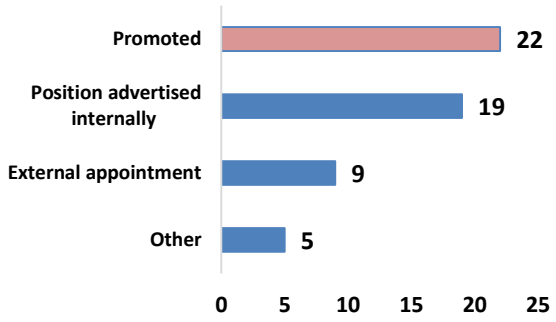


Figure 4.3 Participants' response on elevation methods to management

About 40% of the respondents were promoted to first-line management, 35% were appointed due to an internally-advertised position, and 16% were external

appointments. The remainder (9%) was the “other” group, consisting of 5 participants. The reasons given were as follows: “elevation due to a literal move”, “it formed part of the career development process” (4 participants), and the last participant said they were “advised that they were identified for the management position”.

Mean 1.95

Standard Deviation 0.97

Variance 0.94

4.3.2 Biggest Contribution towards Elevation/Selection and Appointment to First-line Management

What contributed the most towards you being elevated/selected and appointed to first-line management?		
	Frequency	**Percentage**
Educational Qualification	8	15%
Age &Seniority	1	2%
Jobs previously held	3	5%
Skills and Abilities	**26**	**47%**
Technical Knowledge	17	31%
Other	0	0%

Table 4.3 Participants’ response to their selections’ biggest contributing factor

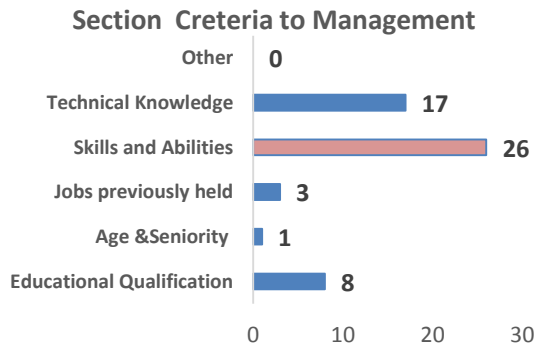


Figure 4.4 Participants’ response to their selections’ biggest contributing factor

The results show that 47% of the participants felt that their skills and abilities contributed towards them being selected for first-line management position, followed by technical knowledge at 31%. The results thus agree with the research conducted into the *70-20-10* learning rule. Only 15% of our participants felt that their educational qualification contributed to them being elevated to management.

Mean 3.78

Standard Deviation 1.32

Variance 1.73

4.3.3 Reasons for Promotion

Reasons for promotion?		
	Frequency	**Percentage**
Loyal to the company	2	4%
Increase responsibility	**42**	**76%**
Increase salary grade	3	5%
BBBEE Requirements	1	2%
Other	7	13%
Total	**55**	**100%**

Table 4.4 Participants' response to reasons for promotion

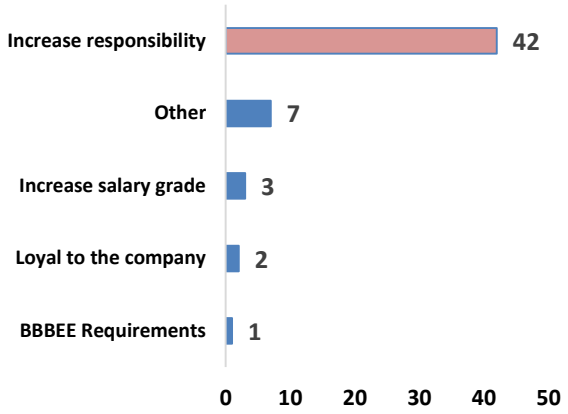


Figure 4.5 Participants' response to reasons for promotion

76% of the participants said that they were elevated to management because there was a need for increased responsibility, followed by the "other" group respondents at 13%, a huge percentage gap from most popular response. The "other" group contained employees whose reasons included that: they were promoted because of the natural career progression; external posting; and one other said they were considered to be the best fit for position, immediate replacing the previous manager. One participant responded in agreement to our literature on the BBBEE requirement as a reason for promotion.

Mean 2.44

Standard Deviation 1.07

Variance 1.14

4.3.4 Amount of Time Taken to Feel Comfortable in a New First-line Management Position

How long did it take to find your feet or to feel comfortable in your new first-line management position?		
	Frequency	Percentage
Less Than 1yr	**29**	**53%**
1 - 3yrs	24	44%
3 - 5yrs	2	4%
5 – 10yrs	0	0%
Above 10yrs	0	0%
Total	**55**	**100%**

Table 4.5 Participants' response to years taken to adjust in management position

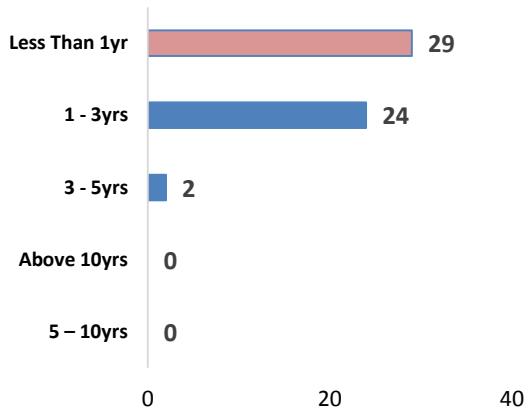


Figure 4.6 Participants' response to years taken to adjust in management position

53% took less than a year to find their feet in their new management positions, whilst 44% took between 1- 3yrs. This shows that the appropriate selection criteria are currently being used within Engen to select technical experts to be promoted into first-line management. The mean value below indicates that the average technical expert takes less than a 1 and half year to find their feet in their first-line new management position.

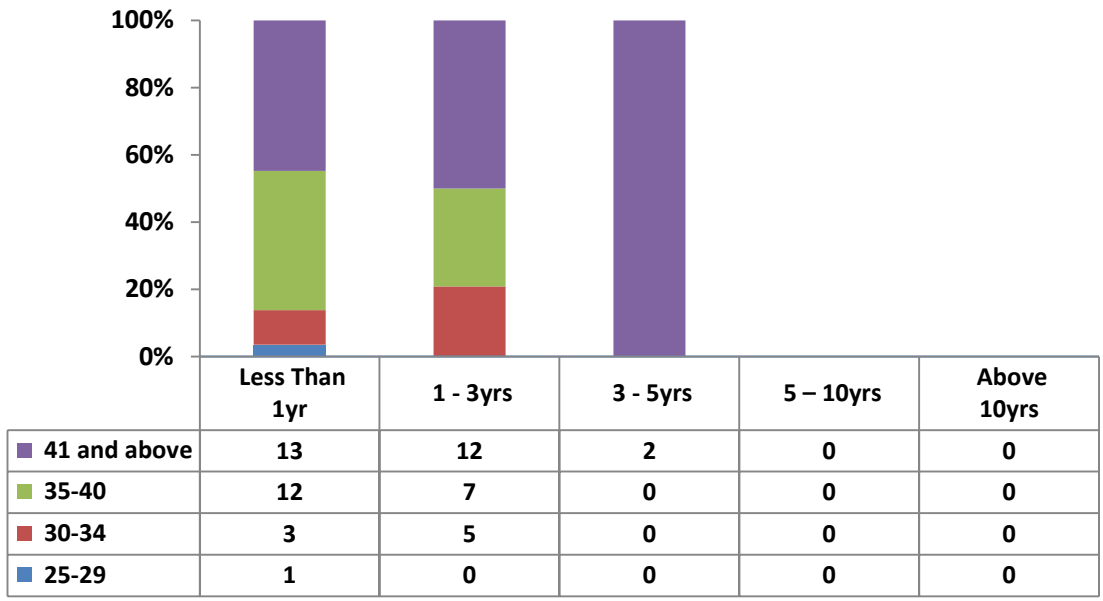
Mean 1.51

Standard Deviation 0.57

Variance 0.33

4.3.5 Number of Years Taken to Transition by Age Group

A comparison was performed in order to check if there was a relationship between the age of participants, and number of years taken to adjust to a management position. The assumption made was that the younger generation takes fewer years to transition to management.



	Less Than 1yr	1 - 3yrs	3 - 5yrs	5 – 10yrs	Above 10yrs
41 and above	13	12	2	0	0
35-40	12	7	0	0	0
30-34	3	5	0	0	0
25-29	1	0	0	0	0

Figure 4.7 Representation regarding the number of years taken to transition by age group

A Pearson's Chi-square test was performed to test the probability of independence between the age group of participants and the number of years they take to transition to management. The resulting Chi-square value equalled 4.643, with a P value of 0.969, degrees of freedom equalling 12, and the critical value for (p =0.01 [1%]) was 26.217. The results showed that the two variables namely the number of years taken to transition, and age group were independent; there was no relationship between the two variables. There was not enough evidence to be able to conclude that the younger or older age group transition more quickly than the other.

4.4 Challenges that Hinder Successful Transitions to First-line Management

The purpose of this section was to identify common issues and challenges that technical experts are faced with when transitioning to first-line management.

4.4.1 Management for Results (Driving Subordinates' Performance)

Management for results (driving subordinates' performance)		
	Frequency	**Percentage**
Strongly Disagree	2	4%
Disagree	13	24%
No opinion or Neutral	6	11%
Agree	**24**	**44%**
Strongly Agree	10	18%
Total	**55**	**100%**

Table 4.6 Participants' response to challenges - management for results

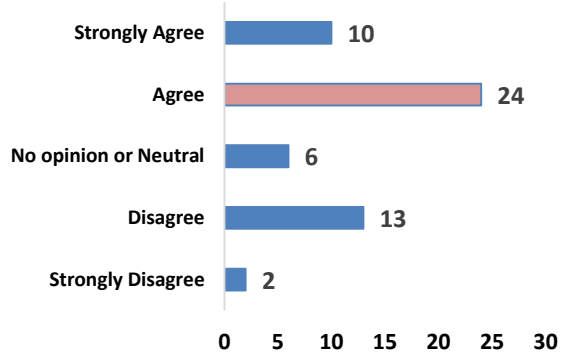


Figure 4.8 Participants' response to challenges - management for results

Respondents were more positive in terms of agreeing with the challenge of management for results. 44% of the respondents agreed that management for results was a challenge, with 18% strongly agreeing. Only 24% and 4% responded that they strong disagree and disagree with the statement respectively.

Mean 3.49

Standard Deviation 1.15

Variance 1.33

4.4.2 Assertiveness (Lack of Confidence and Self-esteem)

Assertiveness (lack of confidence and self-esteem)		
	Frequency	**Percentage**
Strongly Disagree	6	11%
Disagree	**22**	**40%**
No opinion or Neutral	9	16%
Agree	15	27%
Strongly Agree	3	5%
Total	**55**	**100%**

Table 4.7 Participants' response to challenges - assertiveness

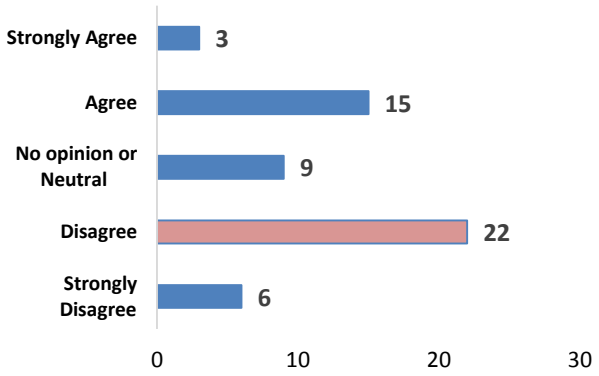


Figure 4.9 Participants' response to challenges - assertiveness

40% disagreed that they faced the challenge of not being assertive, have lack of self-confidence and have low self-esteem. This was followed by 27% which agreed with having faced this challenge.

Mean 2.76

Standard Deviation 1.14

Variance 1.29

4.4.3 Temptation to Revert Back to a Technical Expert Career

Temptation to revert back to Technical Expert career		
	Frequency	**Percentage**
Strongly Disagree	6	11%
Disagree	**16**	**29%**
No opinion or Neutral	9	16%
Agree	**16**	**29%**
Strongly Agree	8	15%
Total	**55**	**100%**

Table 4.8 Participants' response to challenges - temptation to revert back

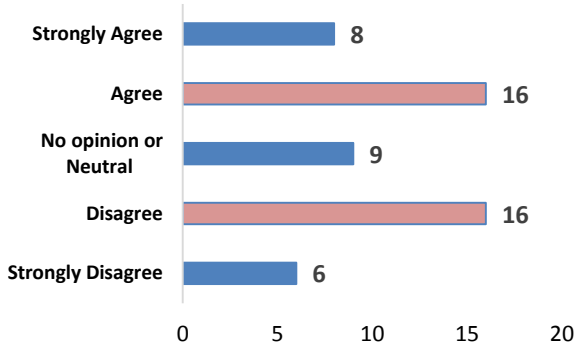


Figure 4.10 Participants' response to challenges - temptation to revert back

The response to this question was even. There was tie between disagreement and agreement with the fact that they have been tempted to revert back to their technical careers. Those that agreed were in line with the literature reviewed previously.

Mean 3.07

Standard deviation 1.27

Variance 1.62

4.4.4 Business Communication & Impactful Business Presentation Skills

Business communication & impactful business presentation skills		
	Frequency	**Percentage**
Strongly Disagree	2	4%
Disagree	11	20%
No opinion or Neutral	1	2%
Agree	**31**	**56%**
Strongly Agree	10	18%
Total	**55**	**100%**

Table 4.9 Participants' response to challenges – business communication

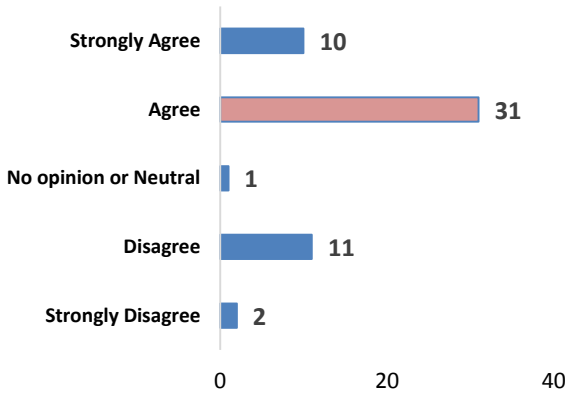


Figure 4.11 Participants' response to challenges – business communication

56% unanimously agree, and 18% strongly agreed that they faced challenges with business communications skills when they first came into management.

Mean 3.65

Standard Deviation 1.11

Variance 1.23

4.4.5 Financial Management

Financial management e.g. budgeting and cost centre management		
	Frequency	**Percentage**
Strongly Disagree	3	5%
Disagree	13	24%
No opinion or Neutral	3	5%
Agree	**20**	**36%**
Strongly Agree	16	29%
Total	**55**	**100%**

Table 4.10 Participants' response to challenges - financial management

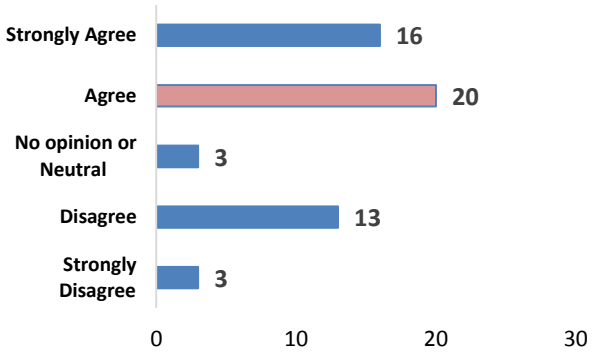


Figure 4.12 Participants' response to challenges - financial management

Some 36% of respondents agreed, and 29% strongly agreed that they were challenged by financial management skills when they first came into first-line management.

Mean 3.60

Standard Deviation 1.29

Variance 1.65

4.4.6 Coaching and Mentoring Skills

Coaching and mentoring skills		
	Frequency	**Percentage**
Strongly Disagree	3	5%
Disagree	13	24%
No opinion or Neutral	4	7%
Agree	**25**	**45%**
Strongly Agree	10	18%
Total	**55**	**100%**

Table 4.11 Participants' response on challenges - coaching and mentoring skills

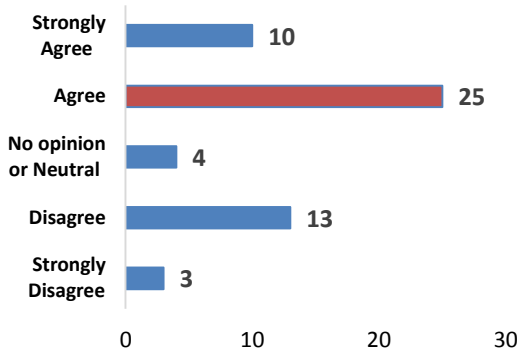


Figure 4.13 Participants' response on challenges - coaching and mentoring skills

45% of respondents agreed, and 18% strongly agreed that they were challenged by coaching and mentoring skills when they first came into first-line management. 24% disagreed, but this is a minority response.

Mean 3.47

Standard Deviation 1.20

Variance 1

4.5 Gauging the Effectiveness of Organisational Support Structures and Programs

The objective was to gauge the effectiveness of organisational support structures and programs currently being implemented at Engen Refinery

4.5.1 Accelerated Capability Development Program (ACD)

ACD (Technical Management Capability Assessment) Program		
	Frequency	**Percentage**
Extremely effective	9	16%
Very effective	17	31%
Moderately effective	**19**	**35%**
Slightly effective	8	15%
Not at all effective	2	4%
Total	**55**	**100%**

Table 4.12 Participants' response to ACD program effectiveness

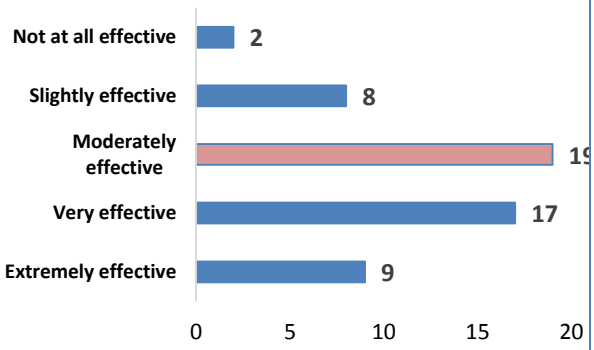


Figure 4.14 Participants' response to ACD program effectiveness

35% of respondents felt the ACD program was moderately effective, followed by 31% of respondents who felt it was very effective, and 15% who felt it was slightly effective.

Mean 2.58

Standard Deviation 1.05

Variance 1.10

4.5.2 Senior Management Development Program

Manage Others Pipeline Model (Senior Management Development Program)		
	Frequency	**Percentage**
Extremely effective	3	5%
Very effective	17	31%
Moderately effective	**20**	**36%**
Slightly effective	13	24%
Not at all effective	2	4%
Total	**55**	**100%**

Table 4.13 Participants' response to Senior MDP effectiveness

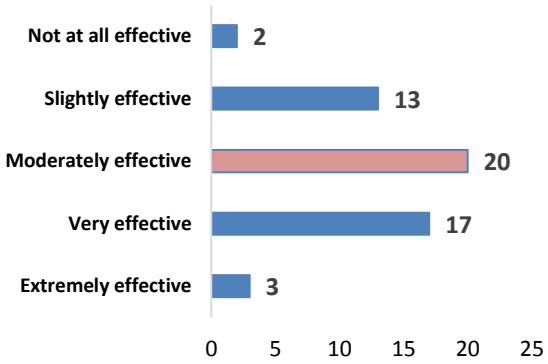


Figure 4.15 Participants' response to Senior MDP effectiveness

36% of participants responded with a 'moderately effective' rating, followed by 31% of participants whom responded with 'very effective', and 24% with 'slightly effective', all with regards to the Senior Management Development Program.

Mean 2.89

Standard Deviation 0.96

Variance 0.91

4.5.3 Management Development Program

Manage Others Pipeline Model (Management Development Program)		
	Frequency	Percentage
Extremely effective	3	5%
Very effective	**19**	**35%**
Moderately effective	16	29%
Slightly effective	13	24%
Not at all effective	4	7%
Total	**55**	**100%**

Table 4.14 Participants' response on Management Development Program effectiveness

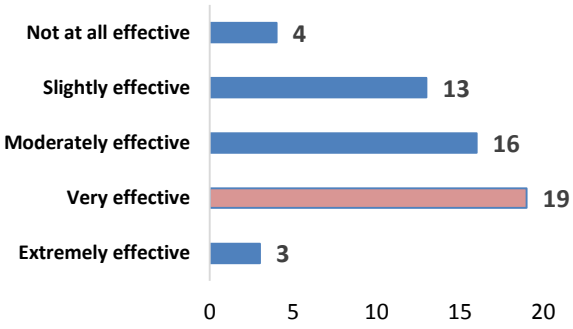


Figure 4.16 Participants' response on Management Development Program effectiveness

35% of participants responded with 'very effective', followed by 29% participants whom responded with 'moderately effective', and 24% with 'slightly effective' in regards to the Management Development Program.

Mean 2.93

Standard Deviation 1.05

Variance 1.11

4.5.4 Mentor Program

Mentor and Mentee Program		
	Frequency	**Percentage**
Extremely effective	3	5%
Very effective	16	29%
Moderately effective	**24**	**44%**
Slightly effective	6	11%
Not at all effective	6	11%
Total	**55**	**100%**

Table 4.14 Participants' response on Mentor and Mentee Program effectiveness

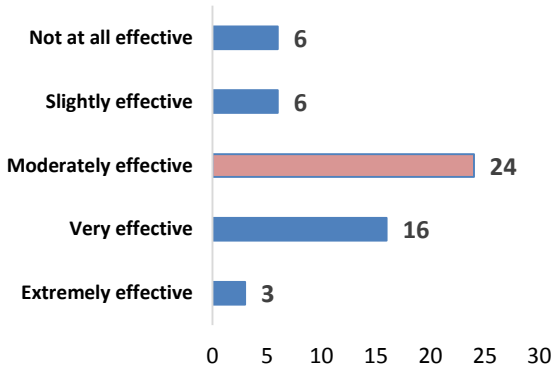


Figure 4.16 Participants' response on Mentor and Mentee Program effectiveness

44% of participants responded with 'moderately effective', followed by 29% responding with 'very effective', 11% with 'slightly effective', and equal 11% with 'not effective at all' for the mentor and mentee program.

Mean 2.93

Standard Deviation 1.03

Variance 1.07

4.5.5 Master of Business Administration (MBA)

Master of Business Administration (MBA)		
	Frequency	Percentage
Extremely effective	7	13%
Very effective	10	18%
Moderately effective	**23**	**42%**
Slightly effective	11	20%
Not at all effective	4	7%
Total	**55**	**100%**

Table 4.15 Participants' response on MBA effectiveness

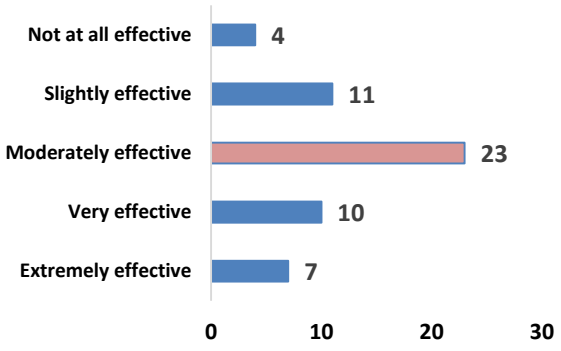


Figure 4.17 Participants' response on MBA effectiveness

42% of participants responded with 'moderately effective', followed by 29% whom responded with 'slightly effective', and 18% with 'very effective' regarding the MBA Program.

Mean 2.91

Standard Deviation 1.09

Variance of 1.20

4.5.6 SAPIA Advanced Certificate for Management Program

SAPIA Advanced Management Development Program		
	Frequency	**Percentage**
Extremely effective	3	5%
Very effective	10	18%
Moderately effective	**29**	**53%**
Slightly effective	8	15%
Not at all effective	5	9%
Total	**55**	**100%**

Table 4.16 Participants' response on SAPIA ACM Program effectiveness

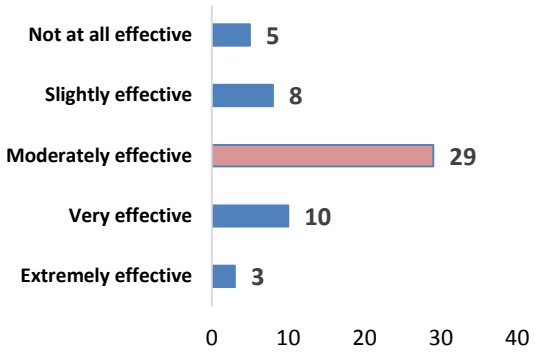


Figure 4.18 Participants' response on SAPIA ACM Program effectiveness

Some 53% of participants responded with 'moderately effective', followed by 18% whom responded with 'very effective', and 18% with 'slightly effective' regarding the SAPIA Advanced Certificate for Management Programme.

Mean 3.04

Standard Deviation 0.96

Variance 0.92

4.6 Comments from Respondents (Open Ended Questions)

All comments have been paraphrased for grammar correction and spell checked.

4.6.1 Additional Comments/Suggestions on Objective 1 (Selection Criteria)

- Technical experts are elevated to management in order to provide meaningful & challenging work to engineers to enable personal development and improved delivery on company goals.
- Skills and abilities contributed towards the management appointment.
- Operations and technical skills are crucial; else the newly-appointed manager will lose respect from the subordinates – especially during decision-making.
- Leadership skills are required– especially emotional intelligence, the ability to inspire others, and getting subordinates to deliver results.
- Managerial skills are required, for example: understanding policies, business processes, procedures, planning, budgeting and resource control.

- The highlights of success in the expert’s previous role are the key to promotion.
- Most people are selected in order to cater for salary increase. As a result, these employees end up frustrated when they realise that the new job is not suited to their capabilities.
- Career progression alignment discussions with the management team also contribute to promotion. These discussions should be used to introduce employees that identified as ‘high potential’ into management development courses in line with the timing of the potential promotion.
- Educational qualification is the first requirement, with experience following suit.
- Promotion is due to the combination of technical knowledge and education.
- It is always good to align individuals’ aspirations with that of the company's needs as this ensures a motivated new manager.
- Selection should not only be based on one’s skills or talent. It should also be based on a person's career aspirations. To ensure one is well rounded in the oil and gas industry, one need to get exposure and improve their skills.
- Junior managers are not given enough skills before being promoted.

4.6.2 Additional Comments/Suggestion on Objective Two (Challenges Hindering Successful Transitions to Management):

- The employee was fortunate that their team members were senior process engineers that did not require close supervision. It was easy for him to delegate and get results from people.
- There is a lot of learning that needs to take place to fine-tune management skills. It happens over time with work experience and continued education.
- One employee was left to 'swim' on their own and was expected to deliver on time with inadequate training.
- Effective communication with team members and ability to influence others helps to overcome challenges with transitioning.
- Emotional Intelligence is also a crucial requirement for a manager.
- Often, a technical expert would have been exposed to coaching and mentoring workshops in any case from a technical-learner point of view. The new candidate profile process would ensure that the long term career planning goals for each employee are met with timely training to gear them for their aspirations.
- Often, technical skills are assumed to be adequate for managing teams; these are two separate roles and not often catered for.
- The transition from a technical role to a management role is a challenge and there must be a transition plan to enable the candidate to adapt easily.
- When an employee was promoted to management for the first time, they had already been versed in managing people as a lead engineer. They also had the opportunity to be exposed to management studies.
- Work-life balance is crucial as this transition can be a bit overwhelming in the first few months, as deadlines are still due, and one is still trying to familiarise oneself with the change, the people, the new systems, and so on.
- Even though one may get exposed to personnel management and budgeting, that doesn’t mean one immediately performs at one’s best when one has one’s own team to manage. Before the first lesson on budgeting, one needs to know how Systems, Applications and Products (SAP) works. SAP is a well-known Enterprise Resource Planning (ERP) and data management programs use by Engen. There is no value if you have no knowledge of how the tools that are meant to help you track things.

4.6.3 Additional Comments/Suggestions on Objective 3 (Effectiveness of Organisational Support Structures):

- The ACD Program and pipeline model are extremely effective: *Engen* now have 10 Technical Professionals (TPs) in the group since its rollout in 2012. TPs in the various refinery process technology clusters work autonomously, making non-routine decisions to assist operations in maintaining unit stability. High potential candidates are identified and groomed according to the pipeline model for a successful move into the next senior management level.
- The MBA Program is not effective because those that are studying the course do not get the opportunity to implement the MBA Principles learned.
- Management is about achieving goals through the people you manage, managers therefore need to create the opportunity to motivate their subordinates to perform at their best.
- Employees with MBAs should be better utilised in management positions.
- One employee recommended company projects where individuals can demonstrate management skills. For example, if a company is having difficulties in certain areas of the business, encourage potential managers to work on these items as projects. They will be able to use their formal training to solve business challenges, and thereby gain the confidence to manage.
- All the management programs are very effective – it depends on the individual as to how they use the knowledge they have learned.
- Of the six programs mentioned above, the employee in question was only exposed to one before their first-line exposure, showing that there is no properly-structured program to prepare one for first-line leadership.

4.7 Summary

Results were presented in this chapter, and descriptive statistics were used to calculate mean, variance and standard deviation of the results to each survey question.

The next chapter outlines the analysis and discussion of the results, and will further link the results to the literature review performed earlier.

CHAPTER FIVE

Discussion

5.1 Introduction

This chapter provides discussion based on the research findings for this study. The results will be interpreted and explained in conjunction with the literature review done in chapter 2.

Fifty-five (55) research participants provided a wide range of responses. Responses to some questions elicited agreements, some respondents remained relatively neutral, and some responded completely contradictorily. The results, in some cases, refuted the literature, and in other cases, concurred with it. The discussion below will follow the same order as the previously-outlined research objectives.

5.2 Bibliographical Observations

5.2.1 Generation Groups

At the beginning of the literature review, the types of generations that are now dominating in the current workforce were discussed as stated by Smoola and Sutton (2002). These were generation x, generation y and the retiring baby boomers, which were aligned with the age groups of the respondents to our survey. Lu and Gursoy also mentioned that technical experts transitioning into management fall within these three generations (2013).

This was important to outline since more generation-y members are currently moving into management positions. The companies need to understand what type of management style they possess, and if they will be able to cope in management positions considering the characteristics associated with their generation group.

5.2.2 Gender and Race

The technical environment was found to still be male-dominated, hence there being 47 males out of the 55 participants. In clearer terms, our participants' gender percentage representation was: 85% males versus 15% females.

An observation was noted when presenting the gender demographics in the previous chapter: the number of female occupying positions within the technical field increases as the age group decreases in age.

Engen should further examine the decreasing number of coloured and white racial groups in the younger generations at their company. There was no literature discussed in relation to the impact of race and gender on transitioning to first-line management. This item will be amended in the next chapter as an opportunity for future researchers to further investigate.

5.3 Criteria Used to Select Technical Experts

5.3.1 Promotion as Widely-used Retention Method

About 40% of the participants were promoted to first line management, 35% were appointed through internally-advertised positions, and only 16% were external appointments. These research results correlated with the literature reviewed, which clearly states that promotion was the most widely-used retention strategy for first-line management (Martin & Schmidt, 2010). This theory was also supported by Bansal (2014).

If a company has a number of technical experts that have high potential for available positions, the company can simply advertise the position internally. This method ensures that all potential technical experts obtain equal opportunity to apply for the position and confidential company information such as trade secretes stays within the company.

According to Marinescu, recruiting internally saves a huge amount of money on the recruitment process and on employee on-boarding expenses (2014). The other benefit that accompanies internally-appointing employees, is that the employees are already familiar with the organisational culture, hence transition to the new position would be much smoother than it would be for the externally-appointed personnel.

5.3.2 Reasons for promotion

Increased responsibility was unanimously chosen as the biggest reason for promotion or elevation to management. 76% of the participants said that they were elevated to management because there was a need to increase their responsibilities, followed by

the participants whom respondended with “other” reasons at 13% - a huge percentage gap from the highest-supported option. These results aligned with the literature reviewed, which stated that in order to ensure continuity and future company sustainability, technical experts are often promoted to management (Moonen, 2011).

These results also concurred with reviewed literature by Winiarska-januszewicz, which highlighted that companies sometimes go up to the extent of increasing responsibility and complexity for the experts in order to retain the technical expert before they are even promoted to management (2014).

Another interesting observation was that one participant responded and agreed with the literature which stated that BBBEE requirements could also be one of the reasons for promotion, as per Patel and Graham (2012).

The literature reviewed also stated that it is important for a company to retain the small portion of black technical professionals they have within the company, and be able to attract new ones. The BBBEE Act also ensures fair representations in terms of race within all levels of the organisation, including the business-ownership level. This would increase the company’s chances of receiving more business opportunities from the Government – every company’s biggest client (Horwitz & Jain, 2011).

5.3.3 Factors that Contributed the Most to Selection

A question was asked of participants: ‘What contributed the most towards technical experts being elevated or selected and appointed to first line management?’. The results show that skills and abilities, at 47%, contributed the most towards the respondents being selected for first-line management positions. This was followed by technical knowledge at 31%, and education and qualification was rated third at 15%. This is aligned with the literature reviewed regarding the *70-20-10* model by Winiarska-januszewicz (2014).

The model suggests that, if one wants to advance one’s leadership pipeline, it can be done through the development of high-potential employees. The focus is outlined as follows: 70% focus of the transition to leadership should be from job based experience; whilst the remaining 30% should be split up into two - either be 20% on classroom

education or training, and 10% based on relationship-coaching and mentoring, or vice versa (Winiarska-januszewicz, 2014).

The results further concurred with other reviewed literature, which states that experience plays a vital role towards a successful transition to management. Education and qualification came third in terms of respondents' rating of importance for selection for first-line management. This also aligned with the literature reviewed, which indicated that education and training are also important.

Research also showed that leveraging experiential activities is the most powerful and long-lasting source of development. However, it is not sufficient alone to fully nurture program participants. Only programs that are built according to the *70-20-10* model can achieve the desired results (Winiarska-januszewicz, 2014). This statement is further supported by the results, and confirms that the other factors are also important in order to be successful in management. The full 70% based on job experience alone will not be sufficient to guarantee success.

5.3.4 Years Taken to Adjust to a New First-line Management Position

Engen is able to select managers mostly from within the company, either promoted or advertised internally, and further participate in external appointments. Both groups, internal and external, indicated that they are taking less than a year to adapt to their first-line management careers. 53% took less than a year to find their feet in first-line management positions, while 44% took between 1 and 3 years.

These results concurred with the literature reviewed, which suggested that within three months of the technical expert taking up their new managerial position, they reach their peak, and one can thereafter easily see if they are heading towards success or failure in the new position (Sutton, 2008).

A comparison was also performed in order to check if there was a relationship between the age of participants and number of years taken to adjust in management. The assumption made was that younger generations take fewer years to transition to management. The results showed that the two variables were independent and there was not enough applicable evidence to conclude that younger or older age group transition more quickly than the other. These results were in contradiction with the

literature reviewed, which suggested that generation y were more accepting to change as opposed to the other two generations (Abib-Pech, 2013).

5.3.5 Summary of Objective 1 Results

There was a strong alignment between the results and the literature reviewed. Promotion and internal appointment were the most widely-used methods for elevation to management. Job-based experience, and technical skills and knowledge were the most supported criterion for selection.

The criteria that currently being used within *Engen* proved to be sufficient to ensure successful transitioning to first-line management, since most respondents, irrespective of their generation, were able to adjust within a year of their appointment.

There were, however, a few comments that were in contradiction with these results: one participant said they were 'left to swim on their own', when they were promoted to first-line management. Another respondent thought "junior managers [were] not given enough skills before being promoted". Hence, there is still plenty of room for improvement for *Engen* to ensure successful transitioning to management.

This takes us to the next study objectives: identifying challenges that first-line managers are faced with during their transition.

5.4 Challenges that Hinder Successful Transition

5.4.1 Management for Results (Driving Performance)

Respondents were more positive than negative in terms of agreeing with the presence of challenges in relation to management for results. 44% of the respondents agreed that management for results was a challenge, with a further 18% strongly agreeing. 24% and 4% of the respondents felt that they strongly disagreed and disagreed with the statement respectively.

Literature reviewed concerning Moonen concurred with the results by identifying Mintzberg's three categories that form part of the role of a manager (2011). One of

these categories was interpersonal skills. These are the skills required to assist the newly-appointed first-line manager in being able to inspire, motivate, and influence their subordinates, improving their performance by doing so. Bakken also emphasised that, as a manager, one needs to be able to give constructive feedback in order to drive performance improvement (2006).

The results and literature aligned, both illustrating that, although most of our participants were able to adjust within a year in first line management, they are still struggling or unable to drive team performance.

5.4.2 Assertiveness (Lack of Self-confidence and Self-esteem)

Some 40% of the participants *disagreed* that they faced the challenge of not being assertive enough (possibly a result of lack of self-confidence or low self-esteem). This was followed by 27% of the respondents whom agreed that they faced this challenge.

The results refuted parts, and concurred with other parts of the literature reviewed which suggested that a first-line manager needs to possess the skills to motivate and influence their subordinates (Moonen, 2011). Ferry also stated that it would be very difficult to motivate and influence subordinates if managers lacked of self-confidence (2015).

Within the *Engen* leadership framework presented in the literature review, there are courses designed and offered at ‘manage-self’ stages such as emotional intelligence course (EngenPetroleum, 2015). These courses are designed to ensure that employees, including technical experts, are able to deal with self-awareness issues before they are moved into management. Looking at the results, these courses proved to be effective since more than 50% of our respondents felt that they disagreed with the notion that they might not be assertive.

5.4.3 Tempted to Revert Back to a Technical Career

The responses to this question were even: we had a tie of 29% disagreeing participants, and 29% in agreement with the fact that they have been tempted to revert back to their technical careers. The results showed that not all managers with technical backgrounds are tempted to revert back to their previous careers.

The results again, concurred with some parts of the reviewed literature, and contradicted others, stating that technical experts found it difficult to shift responsibility to their subordinates

Zidle suggested that managers with technical backgrounds should avoid technical projects by all means because they would surely be tempted into the projects allowing them a comfort zone (2012). Bakken further states the danger of not being able to delegate, which is that it leaves very little time for strategic thinking because the focus is always on little tasks that can be executed by subordinates (2006). Eiser emphasises a new manager needs to avoid macro-managing their subordinates as this could limit development of their direct reports, also possibly leading to resentment and complaints (2008).

5.4.4 Financial Management

Some 36% of the respondents agreed, and 29% strongly agreed that they were faced challenges with financial management skills when they first came into first-line management. Reviewed literature by Moonen concurred with the results, especially the highlighting of one of the Mintzberg manager's roles as an entrepreneur and a resource allocator (2011). Neither of these roles can be filled without basic financial management skills. One of the respondents even went to the extent of mentioning the required system or software packages, such as SAP, that first-line managers need to learn before they are appointed.

5.4.5 Coaching and Mentoring Skills

Some 45% of the respondents agreed, and 18% strongly agreed that they faced challenges regarding coaching and mentoring skills when they first came into first-line management. 24% of participants said that they disagreed, but this is a small percentage compared to those whom concurred with the statement.

The results showed that most of *Engen*'s first-line managers are still struggling with this aspect of their career. Mintzberg's theory, as cited by Moonen, concurs with these results by including mention of the interpersonal and informational skills as part of the major roles that are required by a manager (2011).

As much as first-line managers require 10% - 20% of coaching and mentoring for their position – as per Winiarska-januszewicz (2014) – they also need to return the favour to their subordinate, by becoming coaches and mentors themselves.

5.4.6 Summary on Objective 2 Results

The results mostly aligned with the literature reviewed, and clearly showed that there were still challenges that require serious intervention in order for first-line managers to acquire the skills they need to become more effective in their management careers.

Cappelli mentions that the promotion is usually exciting for the new manager, but that the new package comes with more challenges due to the new responsibilities, including people management, which requires different sets and levels of skills, knowledge, and abilities (2000).

The next objective is focused mainly on the aforementioned interventions, especially in terms of the training courses and programs being used to address these challenges.

5.5 Programs within Engen Petroleum

Talent management needs to ensure that the criteria used to identify leadership pipeline candidates are consistently applied across all considered employees. These needs to be clearly communicated with all employees, especially in terms of their current status and associated responsibilities, as they are the pool of the organisation's future leaders (Winiarska-rjanuszewicz, 2014).

According to the survey results, most of our respondents felt that almost all the programs were either slightly effective, or moderately effective. These programs, as previously outlined, are the MBA program, ACD program, Senior MDP, MDP, Mentorship program and the SAPIA program. These were all found to be moderately effective, apart from the Management Development Program (MDP), which the participants felt was very effective.

The results did not align with the literature reviewed, because the purpose of *Engen Petroleum to* implement these programs is to facilitate seamless transition from 'manage self' to 'manage others', 'manage managers' and 'managing the

organisation'. The results demonstrated that Engen has not yet achieved their aim with these programs. The majority of the respondents felt they were moderately effective.

The Accelerated Capability Development program (ACD) was solely designed for technical employees in order to assist them throughout their career progression route, and to further help them decide if they want to be technical professionals, or follow a purely managerial route (Engen Refinery, 2012). Very few respondents felt this program was effective, leading to the misalignment of results with the literature review.

One of the survey participants commented that the "MBA Program is not effective because those that are studying the course do not have the space to implement the MBA Principles learned". The organisation invests a large amount of money in training these employees, but, at the end of the day, if the organisation has no plan to incorporate their aspirations, they will definitely leave for greener pastures, outside of the organisation. Gurdjian et al. also agree with the results, especially since they emphasise that companies invest a lot of money in these programs, and it is therefore vital to ensure that the people the company has trained are best utilised in terms of their abilities and qualifications (2014).

Another respondent's comment was that the formal training programs are very effective, but there should also be some company projects where individuals can demonstrate management skill. For example, if the company is having difficulties in certain areas of the business, potential managers could be used to work on these items as projects. By doing so they will be able to use their formal training to solve business challenges and thereby gain the confidence to manage.

5.6 Summary

The current criteria used for selecting experts for first-line management proved to be acceptable since most of the participants responded positively to the survey questions, and were able to adjust to their new positions within a year. The motives outlined for promotion were also acceptable, according to the respondents, and most results concurred with the literature reviewed.

Results also confirmed that there were challenges faced by first-line managers, especially in terms of the basic skills (soft skills) required from first-line managers. The literature reviewed also concurred with the results of the survey questions regarding these challenges.

Lastly, most respondents felt that the supportive programs offered at *Engen Petroleum* were only moderately effective, mostly because there are little to no opportunities given after the program has been finished to practice what has been learned.

The next chapter concludes this research, and recommendations are made based on the study's findings.

CHAPTER SIX

Recommendations and Conclusions

6.1 Introduction

This chapter concludes this research, which has been aimed at ensuring the successful, seamless transition of technical experts to first-line management positions. This has been achieved through the research objectives outlined below.

Firstly, it was imperative to examine whether the selection criteria used is sufficient to identify, select, and promote the technical experts whom will succeed in management positions.

Secondly, the research further explored and outlined the common issues and challenges that technical experts are faced with when transitioning to first-line management.

Lastly, the research aimed to gauge the effectiveness of organisational support structures and programs currently being implemented at *Engen Refinery* in Durban that facilitate and ensure seamless and successful transitions to first-line management.

In this chapter we will have a look at the implications of the research, devise recommendations to solve the research problem, and finally, suggest recommendations for future studies.

6.2 Implications of this Research

- This research contributed to the academic project by emphasising that it is acceptable for companies to promote technical experts internally, as it yields mutual benefits to both the company and the technical expert. Companies are able to keep the technical knowledge, and crucial and scarce skills within the company; the technical expert is able to progress forward in their careers and achieve their career aspirations.
- Although the industry is still male-dominated, this research was able to prove that there is still a light at the end of the tunnel for women aspiring to pursue technical careers. The survey results indicated that there are a growing number of females not only in the technical field as experts, but that they are also being promoted to first-line management at an acceptable rate.

- There is not much of a difference in the time taken to adjust or transition to new management positions in terms of newer generations vs. older generations. So companies can therefore continue to use the current methods and criteria to identify candidates for promotion and selection.
- Technical experts that have been identified as candidates for first-line management positions need to be prepared before filling these positions. Most of the time, programs and interventions are executed in a reactive manner – a form of damage control. This, however, could be avoided by being more proactive and send those experts with potential to interpersonal developmental courses before they are moved into first-line management.
- The companies need to improve their on-boarding processes for the external appointed employees.
- Despite most of the respondents saying that they feel comfortable in their positions within a few months of their first-line management, they still faced some challenges, such as: being able to motivate, managing for results, financial management, business presentations skills, and so on.
- Companies invest large amounts of money developing technical experts, and they need to efficiently utilise those new skills. They need to realise a return on their investment. Even for those employees studying on their own, companies need to leverage the new skills that the employee has acquired by increasing their responsibilities, and giving small incentives as a form of appreciation for completing their studies.
- Considering the current workforce's generational span, it can be noted that most employees prefer a more protean type career management, meaning that, if no opportunities are made available for them, they would definitely leave the company within a few months on completion of their qualification.

6.3 Recommendations to Solve the Research Problem

- Job expectations need to be clearly stated to the newly-appointed manager. Companies should not just assume that the managers know what is expected of them – job description, roles, and responsibilities need to be clearly outlined. Alignment is critical for first-line management, especially considering these people are new in management. One should remember that what is perceived to be a

manager's role, might not be necessary be the case once one actually becomes a manager.

- One should be enrolled into a coaching or mentorship program with a proper transition plan in place during the first year of being appointed in a first-line management position. Progress should be tracked closely and improvements made where necessary. Challenges should be discussed, and interventions suggested when appropriate to provide solutions to the challenges.
- Technical experts identified as high potential employees should be prepared before promotion to first-line management. They need to enrol in soft skills training before moving into management, and then put those skills into practised after having filled the first-line management position.
- Proper succession planning should be done for critical positions within the organisation. Companies end up keeping the baby boomers for a longer period because they are afraid of parting with the knowledge and skills that they have attained during the number of years spent with the company.
- Knowledge transfer programs are also essential since it is the best way to prepare a first-line manager. It should form part of the on-the-job coaching and mentoring.
- Project work can always be used as one of the ways to provide opportunities to exercise and expand leadership skills.
- If all fails, technical experts should be given an opportunity to revert back to their technical career – not all people are made to be managers.

6.4 Recommendations for Future Studies

- A study focused on gender comparisons would provide beneficial insight into organisational gender relations, especially since there seem to be an increasing number of females in the technical field. The rate at which the number of positions held by women is growing, and the benefits of a larger female presence within technical fields and first-line management should be investigated.
- Generational comparisons were not thoroughly explored in this research; it would be valuable to know the characteristic differences between generations when transitioning to management.
- A study could be performed in terms of racial representation, especially regarding the government's emphasis on BBBEE and whether it has the desired effect on organisations. Are the businesses really transforming? What are the benefits of

bringing in these new races from the previously disadvantaged groups? Is society as whole benefiting from the BBBEE initiatives, or only is it only benefitting a few?

- Benefits relating to hiring a manager from a technical field as opposed to a manager from non-technical career is an interesting concept to elaborate on.
- This research was solely focus on a private sector company, *Engen Petroleum*. The same research could be performed within the public sector to see if there are any similarities or differences in the results.

6.5 Summary

In this chapter, the key implications and contributions to the scholarship of this research were discussed. We also discussed recommendations applicable to organisational stakeholders, and how *Engen Refinery*, amongst other companies, can benefit from the outcomes of this research. Lastly, recommendations were made regarding future research. This concludes this research regarding the successful transition from the technical expert field to first-line management.

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Appendix 1: Survey Questionnaire

Section A

This section consists of the biographical details which will help to establish the basic details and categories of participants. The questions for this section are as follows and they are all mandatory for the participant to answer:

1. **Select your gender** *
   - ○ Male
   - ○ Female
2. **Please select your age group** *
   - ○ 25-29
   - ○ 30-34
   - ○ 35-40
   - ○ 41 and above
3. **Please select your race group** *
   - ○ Asian/Indian
   - ○ African
   - ○ Coloured
   - ○ White
   - ○ Other (Specify): _____
4. **Please select your technical career sector** *
   - ○ Engineering
   - ○ Computer Science/Information Technology
   - ○ Other (Specify): _____
5. **How many years in a technical career? ***
   - ○ Less Than 5yrs
   - ○ 6 - 10yrs
   - ○ 11 - 15yrs
   - ○ 16 – 20yrs

- Above 20yrs

6. How many years in the management position?*

- Less Than 1yr
- 1 - 3yrs
- 3 - 5yrs
- 5 – 10yrs
- Above 10yrs

Section B

This section consists of the questions within each objective of this study and they are grouped based on objectives as follows

Objective One

To examine if the selection criteria used is sufficient to identify, select and promote the technical expert that will succeed in a management position?

1. **How were you elevated to your first management position**?*

- Promoted
- Position advertised internally
- External appointment

2. What contributed the most towards you being elevated/ selected and appointed to first line Management?*

- Educational Qualification
- Age &Seniority (Yrs. of Experience)
- Jobs previously held
- Skills and Abilities
- Technical Knowledge

3. Reasons for promotion?*

- Loyal to the company
- Increase responsibility
- Increase salary grade
- BBBEE Requirements

4. **How long did it take to find your feet or to feel comfortable into your new first line management position?***

- Less Than 1yr
- 1 - 3yrs
- 3 - 5yrs
- 5 – 10yrs
- Above 10yrs

5. **Any additional comments on Objective ONE: (additional selection and Promotion criteria for first line management)**

Objective Two

The purpose is also to identify and take a close look at the common issues and challenges that technical experts are faced with when transitioning to first line management.

Based on your experience when you were first appointed into first line management, would you say you were severely affected by the following issues/ challenges?

1. Management for Results (driving subordinates performance) *

- Strongly Disagree
- Disagree
- No opinion or Neutral
- Agree
- Strongly Agree

2. Assertiveness(Lack of confidence and self-esteem)*

- Strongly Disagree
- Disagree
- No opinion or Neutral
- Agree
- Strongly Agree

3. Temptation to revert back to Technical Expert Career*

- Strongly Disagree
- Disagree
- No opinion or Neutral
- Agree
- Strongly Agree

Did you feel you needed improvement in the following leadership skills? *

4. **Business Communication & Impactful Business Presentation skills ***

- Strongly Disagree
- Disagree
- No opinion or Neutral
- Agree
- Strongly Agree

5. **Financial Management e.g. Budgeting and cost centre management***

- Strongly Disagree
- Disagree
- No opinion or Neutral
- Agree
- Strongly Agree

6. **Couching and Mentoring Skills***

- Strongly Disagree
- Disagree
- No opinion or Neutral
- Agree
- Strongly Agree

7. **Any additional comments on Objective Two: Other Leadership skills that you feel are crucial for first line managers**

Objective Three

To gauge the effectiveness of organizational support structures and programs currently being implemented at Engen Refinery in order to facilitate and ensure seamless and successful transition to first line management.

How would you rate the effectiveness for the following management programs that are implemented within Engen Petroleum? *

1. ACD (Technical Management Capability Assessment) Program *

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

2. Manage Others Pipeline Model (Senior Management Development Program)*

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

3. Manage Others Pipeline Model (Management Development Program) *

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

4. **Mentor and Mentee Program***

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

5. **MBA Program ***

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

6. **SAPIA ADVANCED MANAGEMENT DEVELOPMENT PROGRAMME***

- Extremely effective
- Very effective
- Moderately effective
- Slightly effective
- Not at all effective

7. **Additional comments on Objective three? e.g. programs you would like to recommend that are not yet implemented at Engen Petroleum but might have been effective in your management career?**

Appendix 2: Gate keepers letter

With us you are Number One | ENGEN

Engen Petroleum Limited
Engen Refinery, 465 Tara Road, Wentworth, Durban
P.O Box 866, Durban, 4000
Republic of South Africa
Reg. No.1989/003754/06
Tel: +27 (0)31 460 3911 Fax: +27 (0)31 460 3000
www.engenoil.com

To: University of KwaZulu-Natal

Graduate School of Business and Leadership

Re: Gatekeepers Letter

This letter serves as a confirmation that *Ntombenhle Khumalo (981170753)* has been

granted a permission to conduct a survey in the Refinery as part of his MBA thesis.

Topic: Successful transition from technical expert to first line management

The survey will be done at Engen Refinery using questionnaires.

The permission is granted under these conditions:

1. Employee will voluntarily participate on the survey.
2. Data collected will be used for educational purpose only, and will only be shared by the UKZN, Graduate School of Business and Leadership, and Engen Refinery.
3. Engen Refinery may request a copy of the report once completed.

Kind Regards,

Name	: Thabani Zondi
Designation	: Manager – Human Resource, Refinery
Contact number	: +2731 460 3306
Email address	: Thabani.Zondi@engenoil.com
Signature	: ____[redacted]____
Date	: 01 Ma[redacted]

A PETRONAS subsidiary company

Appendix 3: Ethical Clearance Approval letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

11 April 2016

Mrs Ntombenhle Khumalo 981170753
Graduate School of Business and Leadership
Westville Campus

Dear Mrs Khumalo

Protocol reference number: HSS/0282/016M
Project Title: Successful Transition from a Technical Expert to First Line Management

Full Approval – Expedited Application

In response to your application received 16 March 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

[redacted]

Humanitities & Social Scinces Research Ethics Committee

/pm

Cc Supervisor: Professor Theuns Pelser
Cc Academic Leader Research: Dr M Hoque
Cc School Administrator: Ms Zarina Bullyraj

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** simbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
Website: www.ukzn.ac.za

Appendix 4: Turn it in Report

Thesis Nkhumalo

ORIGINALITY REPORT

9%	7%	1%	5%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	docplayer.es Internet Source	1%
2	Submitted to University of KwaZulu-Natal Student Paper	1%
3	uir.unisa.ac.za Internet Source	1%
4	Submitted to Midlands State University Student Paper	<1%
5	wrap.warwick.ac.uk Internet Source	<1%
6	Lu, A. C. C., and D. Gursoy. "Impact of Job Burnout on Satisfaction and Turnover Intention: Do Generational Differences Matter?", Journal of Hospitality & Tourism Research, 2013. Publication	<1%
7	Plakhotnik, M. S., T. S. Rocco, and N. A. Roberts. "Development Review Integrative Literature Review: Increasing Retention and Success of First-Time Managers: A Model of Three Integral Processes for the Transition to	<1%