UNIVERSITY OF KWAZULU-NATAL

An evaluation of Eskom's Control Plant Maintenance Department's approach to performance management in KwaZulu-Natal

By

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DECLARATION

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ABSTRACT

Performance management has an insightful effect on the cultures of an organisation, its processes and work environment conditions which allow managers to revise and adapt policies that provide guidance to an organisation. Performance management should be evaluated to understand that it is supported by employees, managers and the systems and processes it operates within. The aim of the study was to establish the level of performance that rests with Eskom's Control Plant Maintenance (CPM) Department, based in the KwaZulu-Natal. The study focused on surveying the total population of 90 CPM technicians who are distributed within the disciplines of Protection, Tele-control, Metering and Direct Current (DC) Systems. The response rate of the survey was good due to CPM technicians' access to technology, the internet and emails. Eighty-eight (88) available CPM technicians responded to an online questionnaire which 61 CPM technicians (69%) completed in full. The remaining two respondents were transferred out of the department and hence were omitted from the survey. The research results have revealed that the level of supervisor support towards performance management was not optimal. The appraisal system did not operate at optimum levels as it lacked guidance on use. Training on how to use the appraisal system effectively was also deficient. Training and development practices were not optimally implemented or used. Co-worker competency levels and competency duration periods were identified as factors that could impede performance of CPM technicians. Technicians sought to receive both intrinsic and extrinsic motivation. Factors of standby duties, long distance travelling and rate of change of technology were seen to affect performance levels of technicians, and the dearth in literature of these factors posed limitations. The study recommends improvements for increasing performance within the CPM department by structuring a more decentralised approach. Focus is placed on supervisor support with roles and expectations being fully defined. Multiskilling of the technicians is also recommended. Detailed improvements on the existing appraisal system are emphasised. The recommendations conclude with a structure, combining the four disciplines, which supports teamwork and introduces a balanced scorecard approach to align employees to the goals of the company.

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LIST OF ACRONYMS AND ABBREVIATIONS

BPP   Business Productivity Programme

BSC   balanced scorecard

CEO   chief executive officer

CFO   chief financial officer

CPM   Control Plant Maintenance

DC   Direct Current

HR   human resource

KZN-OU   KwaZulu-Natal Operating Unit

MBO   management by objectives

PM   performance management

SMART   specific, measurable, attainable, realistic and time-based

SPSS   Statistical Package for Social Sciences

CHAPTER 1
OVERVIEW OF THE STUDY

1.1. INTRODUCTION

Human capital contributes significantly to the growth and sustainability of an organisation. Alignment of an individual's behaviour to the goals and objectives of a company is a critical element that is required for an organisation to ensure that it remains sustainable. Various factors may restrict the performance of a company through the many functions and duties that arise from activities at work. It has become necessary for a company to be continuously evaluated such that it remains directed towards success. Often an organisation's processes, policies and work conditions can impede its performance if not managed correctly. Recruitment, defining roles and expectations, developing skills, evaluating and performing appraisals are performance management processes that need to be constantly assessed for optimal use.

These processes are core activities that managers and supervisors execute at Eskom in ensuring that performance and sustainability of the organisation is maintained. If not managed correctly, employees may display their dissatisfaction and not behave or perform to support the objectives or goals of the business.

An overview of the research study is presented in this chapter where the motivation for the study is discussed. The focus of the study is detailed and the problem statement defined. The aim and the research objectives are then discussed and the limitations of the study are explained.

1.2. MOTIVATION FOR THE STUDY

Performance management should be evaluated to understand that it is supported by employees, managers and the systems and processes it operates within. While there is an abundance of literature on performance management, there is a dearth of literature supporting the activities and functions of a utility. While most studies locally and abroad focus on generic performance management concerns, there is not much literature on the effects on standby duties, long distance travelling and the rate of change of technology that plague field operating technicians in engineering. This research study can contribute

immediately to research in an area that has been severely neglected. This will be a distinct contribution made by this study to the academic domain.

Eskom's Control Plant Maintenance (CPM) Department based in the KwaZulu-Natal Operating Unit (KZN-OU) forms the location of where the study was undertaken. The CPM department will attain unequivocal value from this study. The study will provide substantial insight to the leadership of the department such that they can change current practices to the recommendations provided in this study.

The CPM technicians will also benefit, as the recommendations to improve the level of performance in the department will stem from their direct contribution as respondents to the study. Their participation serves as a driver to improve performance, and their engagement of the survey is the first step in establishing a change to current performance management practices.

Supervisors who are direct reports to the CPM technicians will also benefit directly from this study as recommendations will make improvements on supervisory functions and improve the relationship status with subordinates.

Departments of Eskom that CPM technicians support will also benefit as a result of improved performance levels through recommendations made from this study.

Eskom customers, the public at large in KwaZulu-Natal, can also derive benefit from this study as recommendations will appease satisfaction levels with customers, having more efficient CPM technicians performing at higher performance levels.

Eskom, the company as a whole, will derive benefit as recommendation of the study will align CPM technicians' goals to the goals and objectives of the company.

1.3. FOCUS OF THE STUDY

The CPM department, which operates in the Distribution sector of Eskom, is located regionally in KwaZulu-Natal. The focus of the study was restricted to CPM technicians who operate both centrally and de-concentrated in the areas of KwaZulu-Natal. The supervisors and management of the CPM technicians were excluded so that an unbiased approach could be solicited from the technicians.

1.4.   PROBLEM STATEMENT

The CPM technicians from the different disciplines (Protection, Tele-control, Metering and Direct Current (DC) Systems) have generic job profiles whose job outputs are vastly different, yet they are impacted by similar key performance areas. The present competency matrixes for the different disciplines dictate different time periods for the competency of technicians, which results in accreditation periods being different. The expected periods for a technician to be competent to perform vary amongst the different disciplines. The performance appraisal tool is used as a mechanism to identify both high and low performance. These performance levels are identified too late in the process, such that adequate responses can be taken by management to either reward or make corrective actions. The online appraisal system is not easy to use, nor does sufficient training or guides on use exist. There is a tendency to rate technicians at "average" for half-year performance, resulting in their levels of performance not being a true reflection. The evaluations of technicians are not conducted frequently and their targets are only set when half the year has elapsed. High levels of standby duties especially amongst the protection disciplines have resulted in dissatisfaction. The areas of operation comprise long distances of travel which results in tired and dissatisfied technicians. The rate of change of technology is also very high and therefore competency levels cannot be achieved fast enough. With competency levels not equal amongst employees of a discipline, the more experienced technicians are getting frustrated with competency level differences amongst their co-workers. The Protection discipline, having the highest percentage of technology to be skilled in, is the most aggrieved group. Financial reward seems appealing; however, technicians do say that they want a "thank you" or want their jobs to be more rewarding.

The CPM department is fraught with levels of dissatisfaction about the way in which performance is managed, appraised and recognised for technicians to perform optimally and contribute collectively towards the goals and objectives of the company.

This raises the question: What can management do to improve the existing performance management systems?

Therefore, the focus of the study was pursued to determine what processes and factors affect performance of CPM technicians.

1.5. AIM AND OBJECTIVES

1.5.1. Aim

The aim of the study was to establish the level of performance that rests with CPM technicians. An evaluation was required of the existing performance management system so that recommendations can be made to improve the existing practices and approach.

1.5.2. Objectives

The following objectives of the study were designed to address the research statement:

- To examine the attitude and perception of technicians of the Control Plant Maintenance Department within Eskom's Distribution KwaZulu-Natal Operating Unit towards performance management in general.

- To determine the technicians' attitude towards the present appraisal system.

- To examine the effects of technician training, development, evaluation and reward on performance.

- To identify factors that influence performance management and to recommend improvements to the present performance management system to ensure that it is designed for the purpose of achieving the company's goals, vision and values.

1.6. LIMITATIONS OF THE STUDY

The most significant limitation confronted with in this study was the dearth of academic literature on standby duties, long distance travelling and the rate of change of technology that affect performance. While most studies locally and abroad focus on generic performance management concerns, there is not much literature on the effects on standby duties, long distance travelling and the rate of change of technology that plague field operating technicians in engineering and utilities. Another limitation was that the geographic location of the study was restricted to the KZN-OU. Furthermore, the survey was limited due to the population size. These limitations are fully documented in Chapter 5.

1.7. OUTLINE OF THE STUDY

The progressive steps of the study followed a logical and well-structured approach which is documented and presented in five chapters as illustrated in Table 1.1.

Table 1.1: Structure of the study

Chapter	Content
Chapter 1	This chapter presents and an overview of the research study. An introduction to the research study, the motivation and the focus of the study are also detailed. The problem statement is documented and the objectives of the study are presented. The limitations of the study are also highlighted in this chapter.
Chapter 2	A literature review which introduces the concept of performance management is presented in this chapter. A model and a framework of performance management are documented. An illustration of company goal alignment and performance management is presented. The influence of attitudes and perceptions and the impact of organisational behaviour on performance management are discussed. Performance management and the appraisal system literature are comprehensively presented with the concept of the balanced scorecard being introduced. The role of training development, evaluation and reward on performance management, together with factors affecting skill transfer into the work environment, is emphasised. The concept of remodelling the workplace for performance is explained and discussed with a behaviour-engineering model. The effects of standby duties, competence and teamwork as performance mediators in the workplace are introduced. This chapter concludes with an overview of Eskom and its department Control Plant Maintenance based in the KwaZulu-Natal region. Business information literature on the company is introduced to illustrate influences of the performance management on the business.

Chapter 3	A detailed analysis of the research process is presented in this chapter, together with the steps involved in the research methodology. The aims and objectives of the study are set out with the purpose and population of the study identified. The data collection strategy and the construct of the instrument are presented with links of the research questions to the objectives. The concept of validity and reliability is introduced in this chapter. The analysis of data and ethical considerations concludes this chapter of research methodology.
Chapter 4	Chapter 4 presents the results of the data collected for the study. The treatment of data and the reliability of the questionnaire are presented. Demographic statistics are presented followed by results in relation to the objectives of the study. Cross-tabulated team data is then presented to illustrate a broader analysis of factors that affect performance as set out by the objectives of the study. A correlation analysis between performance management, appraisal, training and factors that affect performance management concludes this chapter.
Chapter 5	The concluding chapter of this study consists of a discussion of the presented results, the limitations and the recommendations of the study. A detailed discussion of the results, and interpretation and analysis thereof are documented, with objectives being linked to findings. The chapter concludes with recommendations based on the findings and recommendations for further research.

1.8. CONCLUSION

Performance management at an organisation needs to be evaluated to establish whether it is operating at optimal performance. This study is aimed at supporting the CPM to identify, evaluate and make recommendations to improve existing performance management

practices, behaviours or processes. An overview of the research study has been presented in this chapter where the motivation for the study has been discussed. The focus of the study and the problem statement were defined. The research question and the research objectives were discussed and the limitations explained. The next chapter will review sources of literature in order to achieve a better understanding of the concept of a performance management system and the various factors and processes that can be improved in order to increase performance in an organisation. This will then support the empirical study to follow.

CHAPTER 2

A REVIEW OF LITERATURE TO SUPPORT PERFORMANCE MANAGEMENT IN A UTILITY

2.1.   INTRODUCTION

Managing performance in organisations needs to be constantly reviewed as dynamic changes in the environment require businesses to adapt so that they remain sustainable. The effect of employee behaviour is a large contributor to the success of an organisation; hence alignment of the strategic goals and objectives of the company to its employees and stakeholders is imperative. Failure to respond promptly and act timeously to the varying requirements of performance management may result in an organisation's failure. The literature review introduces the concept of performance management, a model and a framework for organisations to operate in. An understanding of employee attitudes and perceptions towards performance management are introduced and the impact of organisational behaviour on performance is outlined. The influence of performance appraisal and the role of training, development, evaluation and reward on performance management are then presented. Thereafter, the concept of remodelling the workplace for performance is introduced and factors affecting performance are outlined. A brief overview of Eskom concludes this chapter.

2.2.   THE CONCEPT OF PERFORMANCE MANAGEMENT

The existing literature on the evolution of performance management (PM) demonstrates shifts of traditional approaches to one that is outcome based where economic growth, making a profit and being sustainable are key requirements. Since the beginning of the twentieth century, the role of performance management has been to increase the effectiveness of employees and as a result improve productivity in organisations. Rashidi (2015) described four phases in the evolution of performance management, as illustrated in Figure 2.1.

Phase 1	Phase 2		Phase 3	Phase 4

1900	1954	1960	1970	1990-2000	Present
Scales used for measure of PM	Peter Drucker's Management by Objectives (MBO)	Introduction of Performance Appraisal	Formal written feedback on Performance	360 degree feedback	Outcome-based performance
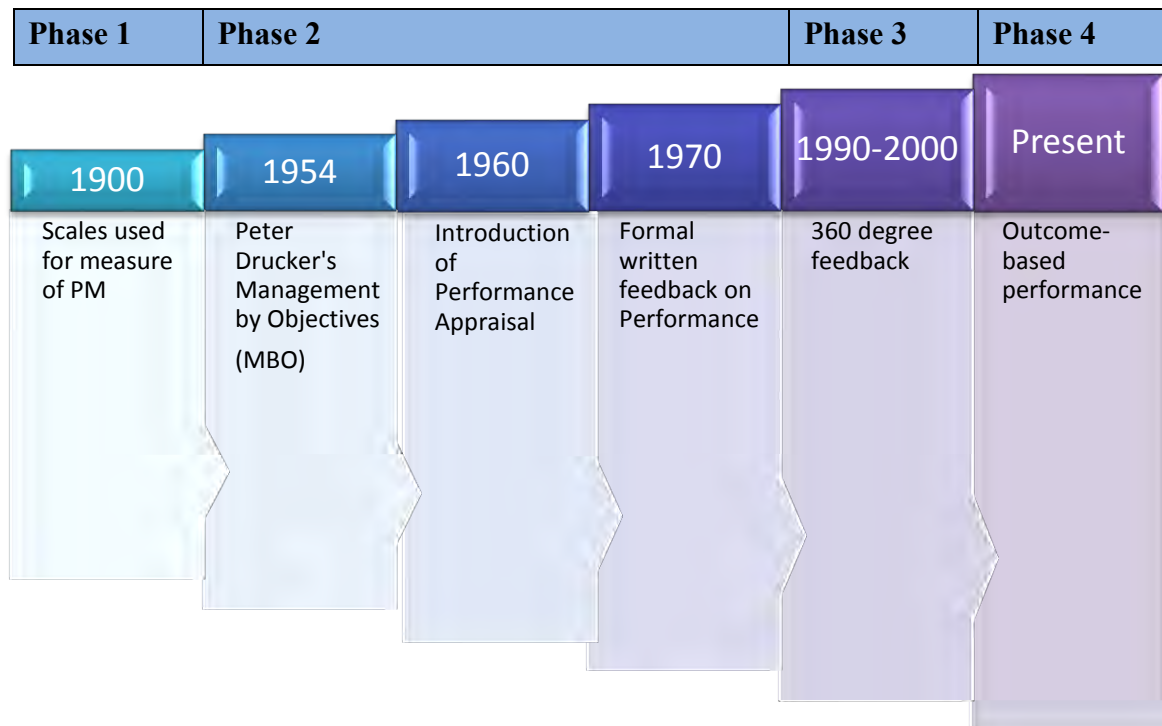
Figure 2.1: Evolution time line of performance management

Source: Adapted from Rashidi, R. 2015. A review of performance management system. *International Journal of Academic Research*, vol. 7, pp. 210-214. Dr. Javid Jafarov/ Progress IPS, Baku.

According to Rashidi (2015), phase 1 portrays the advent of performance management, as early as World War 1, where the evaluation of army officers' performance and abilities were considered. In 1922, performance management was done using scales; however, it failed to clarify the exact stage of PM. In 1954, phase 2 introduced Peter Drucker's Management by Objectives (MBO). This was found to be a useful tool to explain specific goals, but it was found to be too time consuming. A performance appraisal system was introduced in the early 1960s, which failed to give suitable feedback to employees. It was only 10 years later in the 1970s, when employees were able to identify their weaknesses because of formal written feedback that they had received. The third phase introduced a 360-degree feedback system, which gave organisations responses and assessments on issues such as teamwork or employee engagement. Phase 4 focused very much on the role that employees contribute to the success of organisations. An outcome-based performance approach today lies in the development of employees. Continuous and direct communication between supervisors and employees makes this possible. Indisputably,

human capital development, new strategies and goal setting for organisations are the key ingredients for success in the present phase (Biron, 2011; Rashidi, 2015).

Bititci's study (1994 cited by Yadav, 2013) argued that traditional accounting-based and cost accounting performance measures used in the nineteenth century were inaccurate and inappreciable to which the key objective was in controlling processes. The twenty-first century has seen performance management change so much that even the public sector has adopted private sector management tools. Christensen (2006 cited by Hvidman, 2014) stated that the goal for public sector organisations is to move away from bureaucratic processes and to move to a profitable and performance outcome-based process that private entities aspire to.

From the theory of evolution, the concept of human capital growth is vital to performance improvement. Hence, Armstrong's definition of performance management (2000 cited by Kagaari, 2010) is a logical, structured process of increasing employees' performance. This performance ultimately contributes to the improvement of the total performance of an organisation. For enhanced results, Armstrong stated that performance management must be understood and managed under constraints of an agreed framework of goal setting, standards implementation and competency requirements.

Parida, (2015) described performance management as having a profound effect on organisational culture, structures and processes which allow managers to adapt policies and planned guidelines to meet organisational goals.

According to Cardy (2004 cited by Gruman, 2011), performance evaluation is regarded as being the key factor in performance management. However, Cardy concluded that the full process incorporates a collaboration of company policies, practices and design features to develop employee performance.

Performance management cannot just simply be regarded as performance appraisal or compensation for good performance; however, appraisal and reward do form an integral part of a performance management system (Henderson, 2011).

Extrapolating from these definitions, it can be concluded that performance management has evolved to be an integrated, outcome-based process which depends largely on human capital being the mediators of performance in an organisation.

2.2.1. Performance management model

Maier (1958 cited by Clardy, 2013) described the fundamental model pertaining to employee performance via a basic equation, as shown in Figure 2.2.

$$P = C \times W \times O$$

where Performance, Capacity, Willingness, Opportunity.
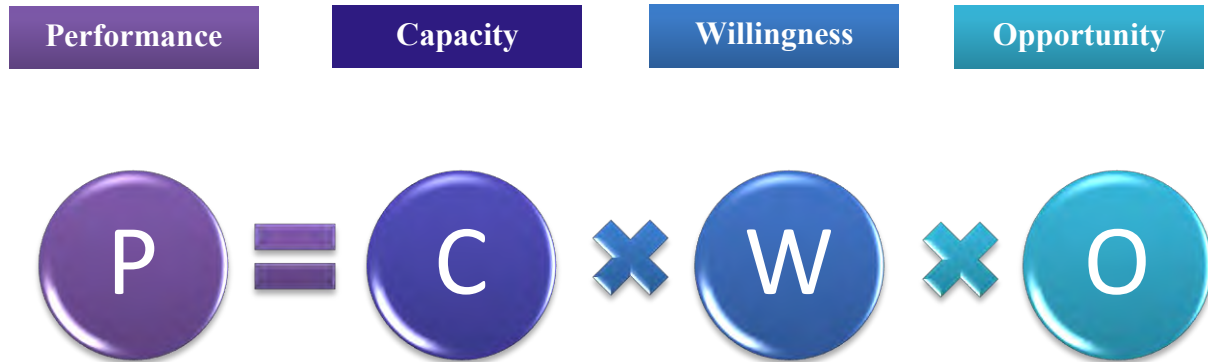
Figure 2.2: Performance management equation

Source: Adapted from Clardy, A. 2013. A General Framework for Performance Management Systems: Structure, Design, and Analysis. *Performance Improvement*, vol. 52, no. 2, pp. 5-15. Wiley Online.

According to Clardy (2013), Capacity (C), Willingness (W) and Opportunity (O) are three factors of a multiplicative relationship that need to exist for performance to ensue. Capacity is related to knowledge, skills and abilities. Willingness refers to motivation required to influence employees through choices of their behaviour. Opportunity relates to arrangement of work that provides the context for either restricting or enabling performance. Campbell, McHenry and Wise (1990 cited by Clardy, 2013) concluded that the impact of job performance relates to eight factors of the performance management equation:

1. Job-specific task expertise
2. Non-job-specific ability
3. Communication proficiency
4. Diligence and perseverance
5. Discipline and individual work habits
6. Co-worker performance support
7. Supervision
8. General management and administration.

These factors contribute to a well-engineered performance management system that contributes to the stream of employees by increasing capacity, skill-sets, motivation and opportunity.

2.2.2.   Framework of performance management

Clardy (2013) described the general framework of performance management consisting of four distinct interlocking levels, as shown in Figure 2.3.

Executive	•Leadership
Organisational Infrastructure	•Business plan and strategy •Measurement and control system •Engineered processes
Human resources Policies	•Selection training appraisal compensation Communications
Working Conditions in the Workplace	•Staffing right personnel •Setting expectations •Monitoring

- Developing Skills (coaching)
- Responding with consequences
- Feedback
- Work Group Dynamics

Figure 2.3: General structure of performance management systems

Source: Adapted from Clardy, A. 2013. A General Framework for Performance Management Systems: Structure, Design, and Analysis. *Performance Improvement*, vol. 52, no. 2, pp. 5-15. Wiley Online.

Figure 2.3 illustrates that a successful performance management system is firstly defined by the executive level where leadership displays commitment, attention and support. Their role structures the organisation's culture through their actions, beliefs and values which are instrumental in shaping employees' perceptions, values, decisions and actions towards a desired performance (Clardy, 2013).

Organisational infrastructure is embodied with three critical elements, with the first being a business plan that forms the blueprint of guiding the organisation's outcomes. The second element identifies outcomes that are implemented and develops measures of performance. The process of collecting and reporting this information forms a control management system. Thirdly, processes must be engineered to delay or increase varying degrees of

organisational performance. Islam, Jasimuddin and Hasan (2015) have identified organisational structure as being a recognised mechanism to control and integrate activities where work is formally allocated.

Human resource policies form the third tier in the performance management system that ensures guidance through which the organisation and the employee's relationship is defined. Iglesias and Saleem (2015) claim that coherently managing policies of staffing, promotion, training and development, communication, evaluation and reward also has a significant effect on relationships that support the corporate culture of an organisation.

The final tier that forms part of the performance management system considers the work environment under which the employee performs. Two distinct factors influence the performance management system, one being the role of managers and supervisors and the other of team dynamics and allegiances which are often beyond the control of the organisation (Clardy, 2013).

Identifying and communicating expectations, training and coaching, performance monitoring and responding to performance with consequences are several performance factors that managers and supervisors perform to shape employees' work performance. Baloyi, Van Waveren and Chan (2014) stated that in the relationship of performance management and job satisfaction, supervisor support is significant for enhancing PMS in engineering organisations with feedback, encouragement, and praise for success of employees. All of this results in performance improvement. The Hawthorne studies (1924-1932 cited by Muldoon, 2012) demonstrate that employees' performance is influenced by teams or workgroups they belong too. Task interdependence can encourage job performance and significantly reduce relationship conflict (Lee, Lin, Huang, Huang & Teng, 2015). Contrary to that, Clardy (2013) argued that teams with good cohesion and low self-esteem find themselves opposed to the goals and decisions of the organisations which in turn impedes performance. Managers and supervisors can shape working conditions to improve the work environment, thus enhancing employee confidence and camaraderie, which would benefit team performance.

2.2.3. Performance management and goal alignment

Kaplan and Norton (1992 cited by Ayers, 2015) stated that a critical element in developing organisational performance is to establish goal alignment in a company's management

systems. Having a company and its human capital in cohesion with its goals and visions, supports an organisation in being sustainable. Hanson, Melnyk and Calantone (2011), however, stated that alignment needs to be measured where metrics of the measure, the standard and reward must be considered. Typically, an engineering company can use its maintenance tasks as a measure, where the tasks are done according to a standard, and employees are rewarded and remunerated for accomplishing and exceeding its targets. However, performance and alignment can only be successful when functions of communication, information and control are considered by management.

Hough, Thompson, Strickland and Gamble (2011) believe that the success of an organisation depends on all its efforts to integrate performance throughout the entire organisation, as depicted in Figure 2.4.
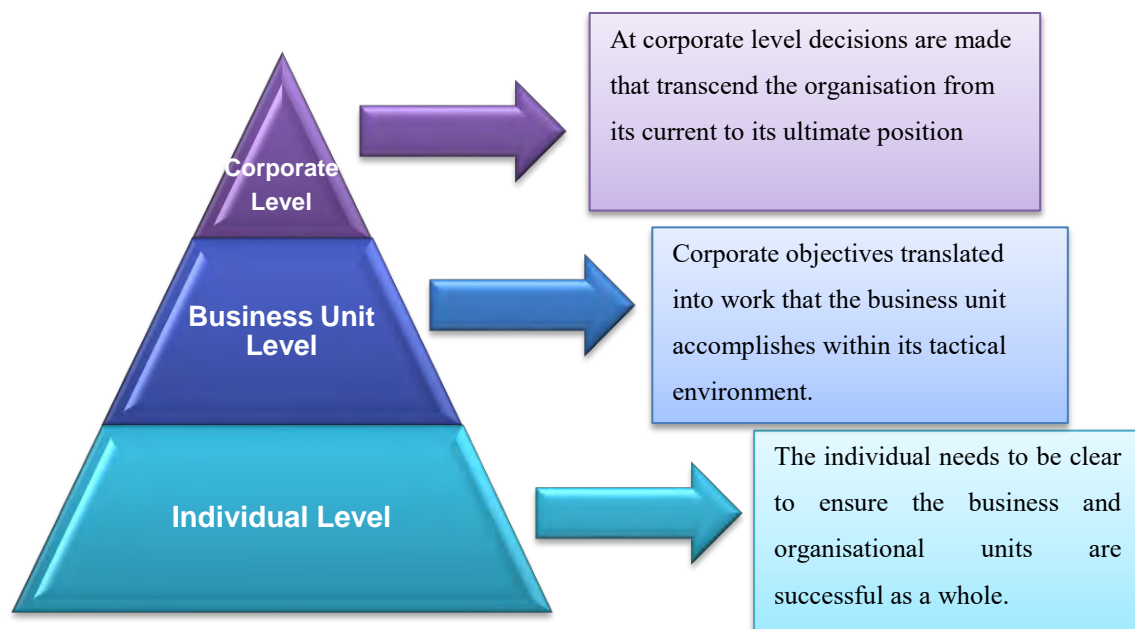
Figure 2.4: Three level organisational alignment

Source: Adapted from Hough, J., Thompson, A.A., Strickland, A.J. & Gamble, J.E. 2011. *Crafting and Executing Strategy: Creating sustainable high performance in Southern Africa*. McGraw-Hill, London.

According to Figure 2.4, the cohesive efforts of corporate, business and individual levels are essential for achievement of the same goal and optimal success of the organisation. At corporate level, decisions are taken that paint a picture of where the organisation's future position would be attained. These objectives are translated at the business unit level into processes that will allow it accomplish in both its competitive and strategic environment.

The individuals' requirements therefore have to be distinct in ensuring that the business's and the organisation's success is achieved jointly (Hough *et al*., 2011).

2.3. INFLUENCE OF ATTITUDES AND PERCEPTIONS ON PERFORMANCE MANAGEMENT

Robbins, Judge, Millett and Boyle (2013) stated that to truly understand attitude, being more than just a statement of like or dislike, its components of cognitive, affective and behavioural segments must be understood. He described the cognitive component as being a description or belief of the way things are, the affective component as being the emotional aspect and the behavioural component as an intention of displaying a particular behaviour to someone or something. Table 2.1 demonstrates examples of these components.

Table 2.1: The components of an attitude

Component	Statement
Cognitive	My salary is low.
Affective	I am annoyed about how little I am paid.
Behavioural	I am going to look for alternative employment that pays better.

Source: Adapted from Robbins, S., Judge, T.A., Millett, B. & Boyle, M. 2013. *Organisational Behaviour*. Pearson Higher Education AU. Wiley Online, 72.

Table 2.1 demonstrates how the components of an attitude are related. Decenzo and Robbins (2015) further claimed that these three components are closely connected. Specifically, the cognition and affect segments are in most ways inseparable (Robbins *et al*., 2013).

Judge and Kammeyer-Mueller (2012) stated that attitudes in the workplace, such as job satisfaction, job involvement and organisational commitment, will have consistent positive co-worker support.

Kaliski's study (2007 cited by Aziri, 2011) stated that job satisfaction is the bedrock ingredient that leads to recognition, reward and career succession which provide an employee a sense of fulfilment. Employees that are satisfied display lower rates of absenteeism, turnover and withdrawal behaviours and job performance increases as a

result. Employees that strongly identify with work they do and who are appreciated, display high job involvement, a form of empowerment revealing their influence and competence to the work environment (Robbins *et al.*, 2013).

Organisational commitment is defined when employees offer their full support to an organisation. Yen, Chen and Teng (2013) pointed out that organisational commitment can be characterised by three factors:

- An acceptance of the company's goals and values as being credible.
- A mindset of contributing a significant effort to the organisation.
- A strong aspiration to remain committed to the organisation.

Employee engagement, a concept of employee involvement, is an essential factor in monitoring performance. Alonso and Mo (2014) mentioned that the research they have done has shown that there are higher levels of performance, commitment and loyalty with engaged employees compared to disengaged ones. Various factors such as cost reduction, competition, market changes and the need to create an environment where employees show satisfaction lends focus on employee engagement. Vosloban (2013) argued that employee engagement is a decision that is personal in nature, and not an organisational one as previous definitions implied.

Kagaari *et al.* (2010, p. 3) cited agency theory of Jensen and Meckling (1976) "that if both parties to the relationship are utility maximisers, there is good reason to believe that the agent (employee) will not always act in the best interests of the principal (employer)". Hence a fair amount of motivation and employee engagement is necessary to reduce or negate the effects of the agency theory.

Vosloban (2013) concluded the employee engagement concept as individual employee's cognitive, affective and behavioural state towards an organisation's anticipated outcome.

The basic definition of perception is a sensory process that people use to select, arrange and recognise their environment by using their sight, hearing, touch, smell and taste senses (George & Jones, 2011).

Jewoola (2014) mentioned that perceptions play a pivotal role in understanding organisational behaviours where managers should have a firm understanding of the negative impact that perceptions have on organisational processes and tools.

2.3.1. Impact of organisational behaviour

Locke and Latham's studies (2002 cited by Christina, Dainty, Daniels & Waterson, 2014) mentioned that firstly when objectives are key to both employee and organisation and secondly it is probable for an employee to reach self-efficacy (goal), it is affirmation that commitment supports a goal-setting theory. The potential for increasing performance is supported when management supports both supervisors' and individuals' goals (Christina *et al.*, 2014)

Barrick, Mount and Li (2013) stated that motivation and behaviour at work are influenced equally by an individual's personality, societal and work roles. It is for this reason that job roles and performance expectations must be clear and adequate for an employee to be motivated so that behaviour is congruent with performance. Self-efficacy lends itself to better performance when the expectations of a supervisor or manager are defined and regular feedback is given on allocated work roles and delegation of duties, and employees are encouraged to come up with more innovative ideas (Walumbwa & Hartnell, 2011).

Buller and McEvoy (2012) stated that when job roles are defined, communicated and measured, regular feedback on performance ensures alignment between an organisation's goals and the interest of the employee. Relevant and frequent feedback about performance management objectives is influential in directing employees to improve in areas that are lacking. De Stobbeleir, Ashford and Buyens (2011) claimed that employees enhance their own innovative performance through feedback they seek.

2.3.1.1. *Application of Maslow's Theory for Organisational Motivation*

Sengupta (2011) stated that employees' human behaviour is governed by Maslow's Motivational theory, which suggests that behaviour is controlled by fundamental needs that are defined in a fixed sequence. Figure 2.5 below illustrates this sequence of needs.
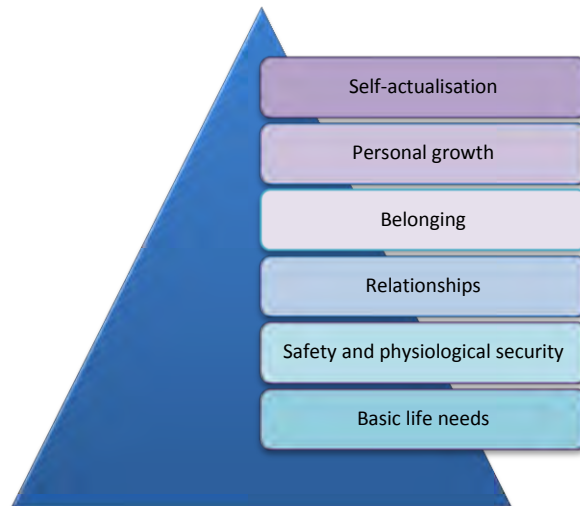
Figure 2.5: Maslow's hierarchy of needs for an individual

Source: Adapted from Bull, R. 2014. Reporting for sustainable success--by applying Maslow's hierarchy of needs to business. *The Free Library*, 55.

According to Sadri and Bowen (2011) and Bull (2014), Figure 2.5 (Maslow's hierarchy of needs for an individual) illustrates that each individual need has to be satisfied before an employee can proceed to the next level. Managers have to sufficiently motivate employees in each tier by providing rewards that help satisfy the need. Sadri and Bowen (2011) related wages and salaries to safety and physiological needs. Management support functions and team cohesion relate to relationships and belonging. Personal growth relates to self-esteem where an employee requires needs such as respect, recognition, and reputation from the organisation to be adequately motivated and improve productivity. The self-actualisation need is achieved when the remaining lower levels have been accomplished. Employees at this level would like to improve themselves compared to those around them. This need enables employees to perform at their highest levels.

2.4.   PERFORMANCE MANAGEMENT AND THE APPRAISAL SYSTEM

Appelbaum, Roy and Gilliland (2011) mentioned that effective performance appraisals are attributed to managers who are well trained on how to conduct them. These managers are trained to tackle supervisory functions, mentoring and advising, managing conflict, defining and placing performance standards, explaining linkages of salaries to systems and lastly, having constructive discussions with subordinates.

Longenecker, Fink and Caldwell (2014) stated that it is essential that managers have detailed instructions and guidelines on how to perform and evaluate performance appraisals. Their studies have concluded that only two-thirds of organisations comply with this.

In managing performers that are off target, Longenecker *et al.* (2014) mentioned that a platform for motivation and encouragement must be created as well as a development plan to increase their performance and the company's performance as a whole.

In defining a performance management system to be credible, an employee's perception of the system is a factor that is largely influenced by a manager or supervisor. Lee and Jimenez (2011) stated that a supervisor's role is to evaluate their subordinates and where the assessment is credible, employees' perception of the entire organisation being credible is often based on this. Providing relevant and continuous guidance, clear work expectations, and setting and measuring short-term deadlines, are day-to day activities of an employee-manager relationship that give credibility to an organisation.

2.4.1. Criteria for effective appraisal

For an effective performance appraisal, Appelbaum *et al*. (2011) mentioned the Piggot-Irvine (2003) model which indicates the essential elements in achieving this, as shown in Figure 2.6.
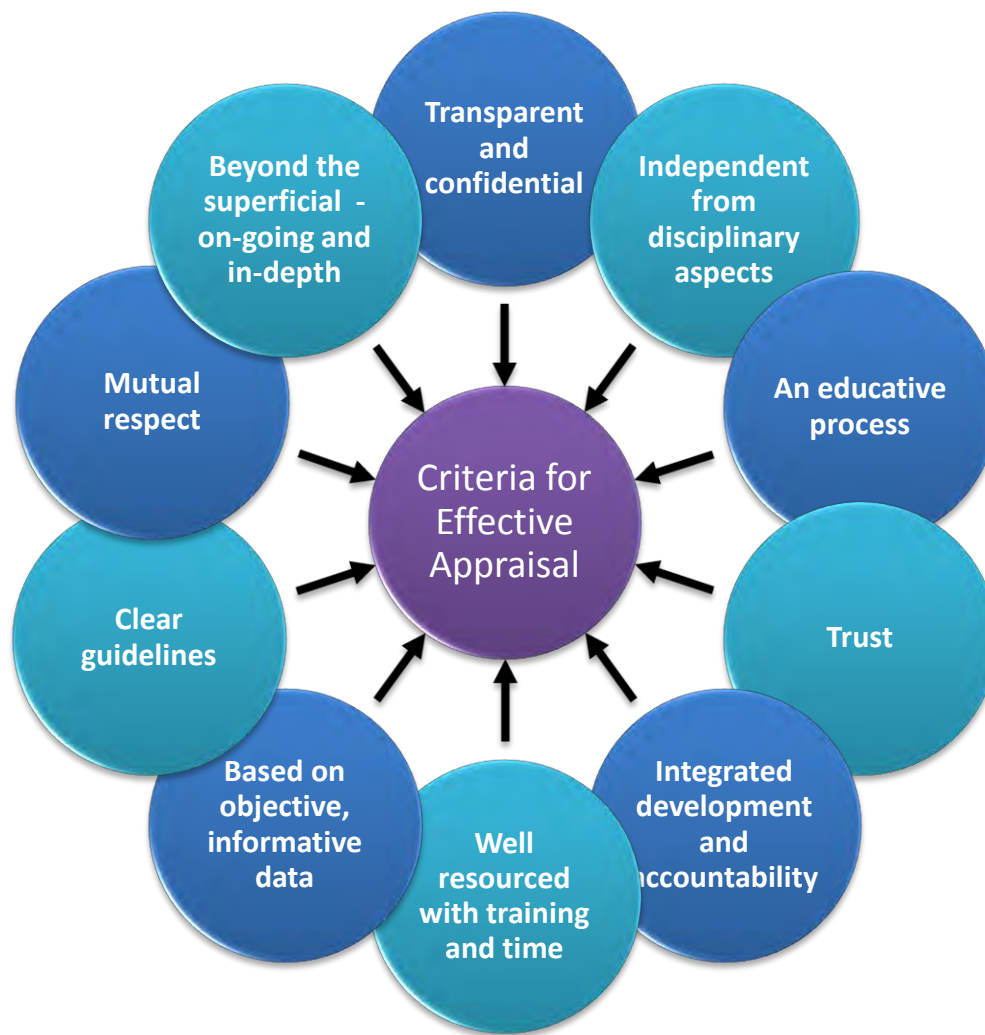
Figure 2.6: Elements of Appraisal Effectiveness

Source: Adapted from Appelbaum, S.H., Roy, M. & Gilliland, T. 2011. Globalization of performance appraisals: Theory and applications. *Management Decision*, vol. 49, pp. 570-585. Emerald Group Publishing, Bingley.

As illustrated in Figure 2.6, the Piggott-Irvine (2003) model, supported by both Appelbaum *et al.* (2011) and Ali (2012), advocated that performance appraisal is a valuable tool in improving efficiency, awarding reward as well as promoting or terminating services of employees. Ali (2012) believes that training of managers and supervisors on how to do appraisals efficiently should be informal but an annual routine. He also claimed that respect and trust can suppress the effectiveness of an appraisal. Quality of standards, setting objectives in advance and the relationship between appraiser and appraisee are central, crucial and necessary for an appraisal to be affective. Khanna

and Sharma (2014) concluded that effective appraisals should include the elements of being specific, measurable, attainable, realistic and time-based (SMART). By managers giving employees frequent and continuous feedback, the most important elements of respect, sincerity and trust set the platform for an effective appraisal (Appelbaum *et al.*, 2011).

2.4.2. Methods for rating performance appraisals

In managing its performance effectively, it is critical for an organisation to select an appropriate method to implement (Grobler, Warnich, Carrell, Elbert & Hatfield, 2011). Figure 2.7 describes common appraisal methods.

Ranking method	•Listing of all employees from highest to lowest
Graphic rating scale	•Likert-type scale – employee rates on factors such as quantity of work, dependability, job knowledge and cooperativeness
Behaviour anchored rating scales	•Consists a series of vertical scales, one for each importatant dimension or work performance
Narrative method or form	•Requires a manager to write a statement about employee's performance – critical incident or essay type
MBO method	•Rates performance on the basis of employee achievement of goals set by mutual agreement by employee and manager
360-Degree feedback	•Multiple appraiser method – collection and feedback of information in a circular fashion

Figure 2.7: Appraisal methods

Source: Adapted from Khanna, M. & Sharma, R.K. 2014. Employees Performance Appraisal and its techniques: A Review. *Asian Journal of Advanced Basic Sciences*, vol. 2, no. 2, pp. 51-58. E-Researchco, India.

As illustrated in Figure 2.7, common appraisal methods evaluate an employee's performance to which an organisation's growth and performance are contingent and dependent upon (Khanna & Sharma, 2014). The ranking of employees that compares them to being best to worse, is a fast and easy method but seldom developmental as there is a lack of feedback (Grobler *et al.*, 2011). Graphic rating scales are probably the oldest and

most widely used scales (unsatisfactory, fair, satisfactory, good, and outstanding). They display attributes to which an employer can indicate the degree to which an employee demonstrates a result (Turgut & Mert, 2014; Khanna & Sharma, 2014). The MBO entails a list of goals where evaluations are made frequently and rewards are based on outcomes. MBO is very much a result-orientated process rather than the way an employee achieves results (Khanna & Sharma, 2014; Grobler *et al*., 2011). The 360-degree method as noted by Campion, Campion and Campion (2015) includes multiple appraisers where confidential and anonymous ratings are obtained from peers, subordinates and supervisors to rate specifically on employee development. Bracken and Church (2013) concluded that the 360-degree approach has multiple benefits in enhancing an organisation's performance and the quality of the performance management process. These include alignment, consistency, agility (technology driven) and accountability.

2.4.2.1. *Balanced scorecard tool*

Kallás and Sauaia (2014, p. 242) described Kaplan and Norton's (1997) balanced scorecard (BSC) tool as one that reveals a company's vision and strategy through a coherent path that includes the organisation's goals and performance indicators according to "four distinct perspectives: financial perspective, customer perspective, internal processes perspective, and learning & growth perspective". These four perspectives are interrelated to converse with the growth, performance improvement or risk reduction of key strategic issues of an organisation. The BSC tool has seen much expansion of its concepts and scope over the years to align disciplines and departments in organisations to their strategic goal and visions. Kallás and Sauaia (2014) described five principles, as illustrated in Figure 2.8, that enable organisations to be strategy-focused.

1 — Translate strategy into operational terms
2 — Align the organisation to create synergies
3 — Transform strategy in everyone's job
4 — Make strategy a continuous process
5 — Executive leadership to mobilise change

Figure 2.8: Strategy-focused organisation principles

Source: Adapted from Kallás, D. & Sauaia, A.C.A. 2014. Implementation and impacts of the balanced scorecard: an experiment with business games. *Developments in Business Simulation and Experiential Learning*, vol. 31, pp. 242-248. s.l.:s.n.

As noted in Figure 2.8, the first principle uses the BSC to describe the strategy which uses non-financial measures (such as job satisfaction or competence) to map out its operational link to organisational performance. The second principle aligns the corporate BSC to business level units supporting internal process visions. By introducing individual scorecards in the third principle, it ensures that employees understand the corporate strategy and alignment of their daily jobs conform to this. This also allows linking of incentives and rewards to the BSC. The fourth principle incorporates a double-loop practice that enables monthly evaluations and financial budgets to align to strategic management processes as one unceasing, single process. The fifth principle requires support in this change management process, such that leadership recognises a new management model that incorporates new corporate values into its structure.

Deployment of the BSC in the public sector can have a profound effect on how employees view the organisation. Molina, Gonzalez, Florencio and Gonzalez (2014) stated that as a result of BSC implementation, employees have a better understanding of the organisation's strategy and its behaviour. Having more knowledge about their organisation's behaviour,

employees may have greater job satisfaction. Molina *et al.* (2014) further stated that BSC implementation at business level has the following effects:

- Alignment of strategies of the company with employees' performance measures.

- Transparency and alignment with compensation policy which enhances employee commitment.

- Improvement of the organisation climate which reduces staff turnover and improves job satisfaction.

- Employees have greater knowledge of the organisation after implementation, and as a result of continuous learning and improvement with BSC, a positive effect may lead to increased growth, profits, productivity and sustainability.

- Better awareness with company goals and employee tasks which results in greater transparency and more precise measurements with appraisals.

- Reduction in employee stress, which improves employee engagement and provides much more satisfied employees.

- Improvement in stakeholder relationships.

As much as the BSC has been a strategy tool, it can also be used as a performance tool at business level. Literature has indicated that linking of corporate BSC to business level BSC has benefits of enhancing performance management at both levels. This has a ripple effect on customers and understanding their needs and as a result contributes to business sustainability.

2.4.3. Performance appraisal rating errors

Pal (2014) noted that employee motivation and productivity are often enhanced when performance appraisal is carried out fairly and accurately. He pointed out that an ineffective appraisal methodology may collate rating errors, as described in Table 2.2.

Table 2.2: Performance evaluation rating errors

Common rater errors	
Rater bias	Error either by valuing or stereotyping employees often stems from demographic or personal characteristics
Halo effect	Rating an employee high due to generalisation
Central tendency	Employer rates everyone at the average
Leniency	Employer rates everyone at a high rating
Strictness	Employer rates everyone at a low rating
Recency/Primary effect	Rating based on last known experience of employee

Source: Adapted from Grobler, P.A., Warnich, S., Carrell, M.R., Elbert, N.F. & Hatfield, R.D. 2011. *Human Resource Management in South Africa*. Cengage Learning EMEA, United Kingdom.

As seen in Table 2.2, common rating problems that are highlighted should be recognised by appraisers. Grobler *et al.* (2011) stated that supervisors and managers must not only acknowledge rating problems but also learn how to avoid committing them. Employers can minimise these problems through the necessary information and training. Wood (2014) mentioned that the most prevalent errors in appraisals are the rater bias and the halo effect. Age demographic is a typical rater bias error when an appraiser becomes sensitive to an older or younger appraisee. When appraisers continue to rate positively when they find a particular aspect of performance favourable, it is the called the halo error and conversely the horn effect is referred to when the appraiser continually rates negatively if just one poor aspect is identified (Iqbal, Akbar & Budhwar 2014).

2.5. THE ROLE OF TRAINING DEVELOPMENT, EVALUATION AND REWARD ON PERFORMANCE MANAGEMENT

Performance management plays an integral role in employee development, evaluation and reward. Henderson (2011) mentioned that key features of performance management must include the following:

• An employee-employer performance agreement that defines both objectives and employee development needs.

• Continuous monitoring and evaluation where high performance is rewarded and employees with low performance are coached and counselled. It is important to note

that both high and low performances are immediately responded to by management and not deferred.

- Regular formal reviews of monitoring, evaluation and management responses towards performance must be conducted, so that a new performance contract be introduced, if necessary.

VuŢĂ and FĂRcaŞ (2015) stated that to develop employees both personally and professionally in their career requires education and training to take place both formally and informally. Continuous development is vitally important in contributing to an organisation's performance. The effects of an organisation having a training programme are very beneficial, as stated by VuŢĂ and FĂRcaŞ (2015) who listed these factors as follows:

- The increase in quality of communication between employees and supervisors
- Employees acquiring new work responsibilities
- Teamwork capability improving
- Increase in the quality of work performance
- Employees' chances of promotion increase.

For an employee to be effective, certain skills acquired can contribute positively to an organisation's performance. Rahman, Ng, Sambasivan and Wong (2013) identified these skills as communication, managing quality, customer service and team building. Skills, however, need to be clear, identified early, and met sufficiently for an effective contribution to an organisation's goals and objectives. Stanley (2014) noted that a needs analysis is essential for identifying deficiencies so that an environment is created with the aim of positively influencing knowledge, skills and attitudes. He further mentioned that supervisors and managers must be involved in developing a training plan where levels of performance can be measured against set standards. VuŢĂ and FĂRcaŞ (2015) argued that just identifying needs is not adequate, as the entire process of a training programme needs to support the development of the employee. Good support for the training programme is obtained when both management and the employee needs are satisfied with a sound backing of financial resources (VuŢĂ & FĂRcaŞ, 2015).

2.5.1. Factors affecting skills transfer

The transfer of skills from training into the work environment is essential for the enhancement of performance in an organisation. The research findings presented by Brinia and Efstathiou (2012) show that several factors either promote or impede the transfer of skills. Table 2.3 highlights the elements of skills transfer that an organisation should focus on to ensure a training programme is effective for organisations to achieve their goals.

Table 2.3: Factors of training transfer

Trainee characteristics	Motivation to learn
	Motivation to transfer training
	Opportunity to use training
	Personal career goals
	Motivation from work
	Organisational commitment
Training design	Content of training
Working climate	Colleagues' support
	Supervisors' support

Source: Adapted from Brinia, V. & Efstathiou, M. 2012. Evaluation of factors affecting training transfer on safety in the workplace: A case study in a big factory in Greece. *Industrial and Commercial Training*, vol. 44, no. 4, pp. 223-231. Emerald Group Publishing, Bingley.

Trainee characteristics, training design and the working climate are three factors illustrated in Table 2.3 that play a major role in which employees transfer their training into the work environment. Brinia and Efstathiou (2012) believe that these nine factors have a constructive outcome on skill transfer into the workplace. For these factors to further develop, a company should ensure steps that allow these training paybacks to be taken full advantage of. Ghosh, Chauhan and Rai (2015) emphasised supervisor support where encouragement, assistance and guidance on the use of these skills in the work environment are paramount. Frequent evaluation of employees through stages of training (pre-training, during and post training) further enhances the positive relationship that supervisor support has on skills transfer.

Zábojník (2014) stated that goals of incentive and performance feedback are the main objectives that performance evaluations serve. By linking pay and promotion to goal

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achievement, evaluations can extract information to use in rewarding an employee for good performance (Moynihan & Pandey, 2010). Performance feedback to employees through evaluation relates information that is useful to improve organisational learning and improve on decision-making (Nielsen, 2014). The frequency of evaluations is promoted in literature as to negate the fact that managers would underrate their employees when evaluations are few (Zábojník, 2014).

High performance is accomplished by well-motivated people who are autonomously proactive and do more than what is expected of them (Armstrong & Taylor, 2014). The types of motivation are described as being intrinsic or extrinsic. Armstrong and Taylor (2014) described intrinsic motivation as one being self-motivated as a result of a job being interesting and challenging and which allows one to be autonomous. Extrinsic motivation requires an action to motivate people, such as incentives, increased remuneration, praise, promotion or even punitive action or criticism. Intrinsic and extrinsic ways can be explained by various motivation theories.

Often the challenge is to motivate problem employees. Daly and Kleiner (1995, p5) mentioned that the one theory that does motivate employees is the expectancy theory. This theory describes an individual who pushes himself with the motivation that this particular effort will "lead to good performance, and the good performance will lead to preferred outcomes". An addition to this theory is the inclusion of the nine Cs (capability, confidence, challenge, criteria, credibility, consistency, compensation, cost and communication) proposed by Walter Newsom, a professor at Mississippi State University. These nine Cs are areas that a supervisor can propose to a problem employee.

Rabey (2011) described motivation as a response, and synergy is what develops from the value of teamwork, leadership and relationship. His reference to shared trust and co-operation in the workplace is regarded as the cement that holds an organisation together, where employees and managers share information and seek improvement on all levels.

Ankli and Palliam (2012, p. 7) supported Deci and Ryan's (2002) self-determination theory (SDT) as a "model to successfully motivate an organisations workforce," and stated that "SDT identifies individuals as having three universal psychological needs pertaining to autonomy, competence and relatedness that are essential for psychological growth, optimal functioning, and well-being in any fields of endeavor". In essence, extrinsic reward has the

expectation that repeat work would require payment and it is least likely to happen without it. In an environment where finances are tight, such alternate forms of motivation would be strongly promoted to build interest where employees find jobs intrinsically interesting.

According to Chevalier (2014), managerial support strengthens the association of intrinsic motivation to employee satisfaction. However, he concluded that where high levels of an expectation of extrinsic reward exist, this association weakens.

2.6.   REMODELLING THE WORKPLACE FOR PERFORMANCE

Chevalier (2014) updated the behaviour engineering of Gilbert (1978), which identifies gaps in performance. This is illustrated in Figure 2.9, which distinguishes an individual's behaviour (a contributor of the performance equation) and the environmental structure to which factors either enhance or reduce performance.

Environment	Information	Resources	Incentives
Individual	Knowlegde and Skills	Capacity	Motives
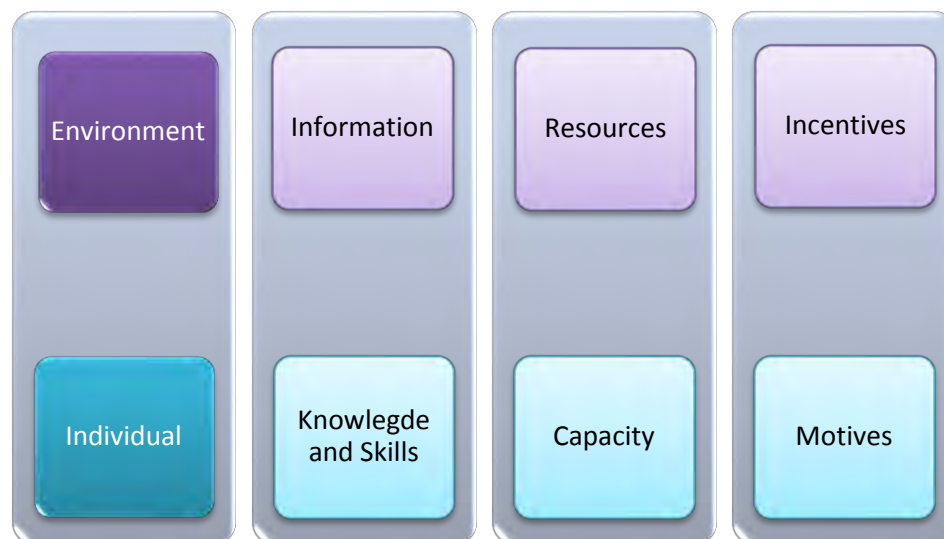
Figure 2.9: Behaviour engineering model

Source: Adapted from Chevalier, R. 2014. Improving Workplace Performance. *Performance Improvement*, vol. 53, no. 5, pp. 6-19. Wiley Online.

According to Chevalier (2014), the factors of information, resources and incentives that impact performance are sustained by the work environment. He mentioned that information is characterised by providing frequent feedback, clear role clarity, expectations and proper guidance for work to be carried out. Resources identified with tools, processes, materials and time to accomplish the task in a safe, clean, organised and conducive environment. Incentives certify that both intrinsic and extrinsic factors are present to promote performance. These incentives apply to the employee, the task and the workplace.

Chevalier (2014, p. 9) stated that "motives, capacity and knowledge and skills" are what employees transfer to the workplace. He stated that an employee's motives must be aligned to the workplace so that aspirations for the individual to excel are acquired. Capacity identifies with the ability of the employer to acquire what is necessary for a successful output. It is necessary that the employee has the adequate knowledge and skills to accomplish work, be multi-skilled to understand other employees' roles and be appropriately placed to use and share what they have acquired (Chevalier, 2014).

2.6.1. Effect of stand-by duties on performance management

Another environmental factor to consider is standby duties, which if not managed correctly can contribute negatively to performance management. Ziebertz, Van Hooff, Beckers, Hooftman, Kompier and Geurts (2015) defined stand-by duties (also termed on-call duties) as a process where employees are scheduled on a 24/7 basis to carry out duties, called on by their employers, which are generally emergency-related in nature. Of particular interest in the author's studies, related to off-site standby duties, is the mention of "fatigue, work-home interference and performance difficulties" (Ziebertz *et al*., 2015, p. 1). Firstly, the employee who is called out during standby duties, has their free time interrupted, has increased work stress exposure, and a loss of time to recover. Secondly, employees have to stay in a close radius to the workplace and abstain from alcohol during on-call duties. This relates to home-work interference, a restriction that disables the employee from detaching psychologically from work. Ziebertz *et al.* (2015, p. 2) stated that this "lack of detachment relates to negative recovery-related outcomes such as fatigue, work-home interference, and emotional exhaustion". Ziebertz *et al.* (2015) also stated that standby duties can be seen as being very stressful and they listed the following factors that contribute to stress:

- Employee lacks control as he is uncertain when he will be called out or not.
- Employee does not have the ability to rest during an inactive standby period.
- Employee has perceived standby work demands.
- Employee has restrictions (e.g. close work-home radius).
- Employee may not be satisfied with the remuneration placed on standby duties.

Heponiemi, Puttonen and Elovainio (2014) supported the findings of Ziebertz *et al.* (2015) and concluded that fatigue and work-family conflicts contribute to employee stress, job dissatisfaction and low work morale. Not much research done contributes to the reduction

of stress and dissatisfaction with standby duties. Barbier, Hansez, Chmiel and Demerouti. (2013) suggested that when more resources are available, better engagement of employees is achieved. This may be a contributor to relieve the stress of standby duties. Wali (2012) concluded that with a fair amount of available resources the number of standby shifts for an employee can decrease and on-call duty hours can be reduced.

2.6.2. Role of acknowledging competence and teamwork as performance mediators in the workplace

The role of formal training and development is vital in enhancing performance management in the workplace. However, this seems insufficient if competence is unrecognised at the informal level, where teamwork seeks understanding of co-worker competence to be both formal and informal. Berglund and Andersson (2012) supported this statement by stating that as much as competence is evaluated and recognised by formal interventions, much informal training is unrecognised due to it being undocumented. The authors argued that knowledge and skill developed at the workplace should gain recognition irrespective of how they have been acquired. Andersson and Fejes (2010 cited by Berglund & Andersson, 2012, p. 73) stated that "the Recognition of Prior Learning (RPL) is gaining ground as a method for the assessment and evaluation of a person's knowledge and skills". Co-workers would want to identify their work colleagues with both formal and informal of levels competence. Sadly, RPL is rarely debated at the workplace where it could contribute significantly to the assessment process and be a huge benefit for both employer and employee (Berglund & Andersson, 2012).

Teamwork plays an integral role in improving work performance. Nadal, Mañas, Betlem Sabrià Bernadó and Mora (2015) believe that organisations create larger profits when employees work as a team rather than working alone. Kayes, Kayes and Kolb's statistics (2005 cited by Nadal *et al.*, 2015), show that 80% of employees forge relationships with their work colleagues out of a team of 100. The authors also stated that most job-related difficulties are resolved through work team meetings (Nadal *et al.*, 2015).

Co-workers display great teamwork when competence is identified amongst work colleagues; however, they tend to exclude individuals who are not identified to be as competent as they would expect. Scott, Zagenczyk, Schippers, Purvis and Cruz. (2014) stated that employees respond negatively when excluded by colleagues at work. However, it has been argued that when given employer support (for example performance-related

monetary incentive), negative performance is overcome due to this support. When organisations provide support such of reward, recognition, desirable work conditions and favourable training and development experiences, the effects of co-worker exclusion are annulled (Scott *et al*., 2014).

Coaching and mentoring play an important role in the workplace in enhancing organisational performance. Erdem and Özen-Aytemur (2014) stated that perceptions of mentoring are closely associated with the competency of their work colleagues. Moreover, the authors noted that co-worker mentoring expectations link trust of employees to the information and guidance given by a co-worker. A regular practice of co-workers being guided by the employer also improves trust in that relationship. Mayer, Davis and Schoorman (1995 cited by Erdem & Özen-Aytemur, 2014) concluded that where trust is associated, a co-worker perceives the other as being competent.

It can be summarised from the above, that acknowledging competence in the workplace at all levels is important for teamwork, trust and synergy amongst workers to enhance performance management.

2.7. AN OVERVIEW OF ESKOM

Eskom was first established in 1923, as the Electricity Supply Commission (Escom) and celebrated 90 years of being in operation in 2013. Having operated for nine decades in South Africa, it generates approximately 95% of electricity in South Africa and approximately 45% in the rest of Africa. Presently, Eskom is a 100% state-owned electricity utility which is strongly supported by government. It consists of three main divisions, namely Generation, Transmission and Distribution, which are responsible for creating and distributing power from power stations to consumers via a national grid of electricity. According to Eskom Holdings SOC Limited (2015a), Eskom operates nationally in South Africa with nine regional distribution operating units (Gauteng, Eastern Cape, Northern Cape, Western Cape, North West, Limpopo, Free State, KZN-OU and Mpumalanga).

2.7.1. Control Plant Maintenance: KwaZulu-Natal Operating Unit

The Control Plant Maintenance Department is based in the KwaZulu-Natal Operating Unit (KZN-OU) of Eskom's Distribution Sector. CPM has an umbrella of four disciplines under its operating wing – Protection, Tele-control, Metering and DC Systems. These

departments are geographically de-concentrated into Margate, Empangeni, Pietermaritzburg, New Germany and New Castle areas in the KZN-OU, except for DC Systems which is centrally-based in New Germany. In terms of performance, these departments' core duties relate to asset creation, maintenance, ensuring continuity of supply and revenue measurement. The Protection and Tele-control Departments perform standby duties from their de-concentrated areas. DC Systems do not perform standby duties (Protection does first line standby in the de-concentrated areas for DC Systems). The Metering discipline has limited standby duties (Nzama, 2015). The competency requirements differ amongst the different disciplines and as a result the rates of becoming competent vary. Due to the large rate change of technology and quantity of technology, Protection takes the longest to obtain competency (6 to 12 months for basic level, and up to 6 years for advanced). The other disciplines have considerably shorter competency duration times (Mpunzana, 2015).

2.7.2. Company vision

"Sustainable power for a better future" (Eskom Holdings SOC Limited, 2015a, p. 1).

2.7.3. Company mission

"To provide sustainable electricity solutions to grow the economy and improve the quality of life of the people in South Africa and the region" (Eskom Holdings SOC Limited, 2015a, p. 1).

2.7.4. Company strategy

"To stabilise the business and to re-energise for longer term sustainability and growth" (Eskom Holdings SOC Limited, 2015a, p. 1).

2.7.5. Strategic objectives

The strategic objectives of Eskom, listed below, are summarised as per Eskom Holdings SOC Ltd (2015b):

- Attaining and guaranteeing security and reliability of electricity supply
- Attaining and guaranteeing the business and financial sustainability of Eskom
- Reducing Eskom's carbon footprint and the impact Eskom has on the environment.
- Supporting and aligning with Government's strategic initiatives

- Driving industrialisation and transformation of the economy and the procurement landscape.

2.7.6. Business information

The year 2015 had significant changes that affected levels of satisfaction of Eskom employees. Mantshantsha (2015) stated that an ex-gratia payment was made to Eskom employees although company performance targets had not been met. Eskom had embarked on a Business Productivity Programme (BPP) to introduce budget reductions in aid of improving operational efficiencies and to enhance productivity. It was announced on 25 September 2015 that Brian Molefe was appointed as group chief executive officer (CEO) of Eskom, Anoj Singh as chief financial officer and Ben Ngubane as chairman of the company (Paton, 2015).

2.8. CONCLUSION

With dynamic changes in the environment, organisational culture and the effects of organisational behaviour, companies need to review and revise their performance management systems to remain relevant and aligned to the goals and strategies. Performance management's approach, its policies, and its organisational alignment all need to be assessed, revised and implemented for business level units to remain directed to its corporate objectives to ensure sustainability.

This chapter introduced the concept of performance management, its framework and stressed the relevance of alignment to the corporate strategy to ensure it is applied effectively to an organisation, its business and operational units as a whole. Performance management has been presented as an obligation for organisations to respond to the dynamic changes in the work environment. After discussing the performance management concept, its model and framework, the impact of organisational behaviour and the effects or motivation on employees were highlighted. The concepts of training, development, evaluation and appraisal were introduced and the significance of identifying appropriate systems and alternative tools to achieve strategic alignment was discussed. A behavioural engineering model was then presented to reflect how factors of performance management need to be directed.

The literature review proposes that organisations need to review their performance management approach, redesign, implement and reposition performance management in

business units to align to corporate goals and strategies. There is limited literature on the effects of standby duties, long distance travelling and rate of change of technology on performance. Further academic and practical research is required to close this gap. The methodology described in the next chapter will construct an approach that highlights the effects of this.

CHAPTER 3
RESEARCH METHODOLOGY

3.1.   INTRODUCTION

The aim of this chapter is to create a discourse around the research method employed in acquiring the results of the study. The literature presented in the previous chapter outlined concepts of performance management, a model as well as a framework of how performance should effectively be achieved. Performance management in the Control Plant Maintenance (CPM) department at Eskom KZN-OU required an analysis of the current performance management structure. Hence, appropriate justification is provided for this research that was conducted.

This chapter provides a descriptive analysis of the adopted research methodology for determining the attitudes and perceptions of CPM technicians towards performance management, as well as the procedure governed by this study. The research methods or techniques that were used for the research study are described in this chapter and demonstrate a justified choice for this particular performance management assessment. The array of steps employed will encapsulate the approach used, data collection strategies implemented as well as an analysis of the data. The ethical consideration process is also highlighted in this chapter.

3.2.   COLLECTIVE UNDERSTANDING OF RESEARCH

Research helps organisations identify and recommend solutions to key strategic and operational concerns. Hair Jr, Wolfinbarger, Money, Samouel and Page (2015, p. 5) stated that "business research is a truth-seeking function" that allows the researcher to collect, study, deduce, and report information so that business leaders become more knowledgeable when making strategically holistic decisions. Phillips and Burbules (2000 cited by Creswell, 2013) described research as a method of constructing, refining and discarding claims that are more justified. Research collectively amounts to an understanding that will allow managers to improve organisational productivity as a result of systematic, logical, methodical approaches (Sekaran & Bougie, 2013; Hair Jr *et al*., 2015).

3.3. AIM AND OBJECTIVES OF THE STUDY

The concerns addressed in Chapter 1 outline the current state of performance management in the CPM department at Eskom KZN-OU. The attitudes and perceptions of the CPM technicians contribute significantly to how performance in the department is managed. A lack of understanding in the usage of performance management systems has created a discrepancy between performance management, and the following elements:

- Appraisals
- Training and development
- Evaluation
- Reward.

The effects of not acknowledging these irregularities may lead to a decline in employee morale, employee satisfaction and ultimately a decline in the performance of the department. It is clear that if the CPM department does not evaluate the current state of the performance management system, this will lead to misalignment of the goals and strategies of the state-owned company, Eskom.

The CPM technicians, consisting of different disciplines (Protection, Tele-control, Metering and DC Systems), currently lack confidence in how various performance elements are measured.

3.3.1. Aim

The aim of the study was to establish the level of performance that rests with CPM technicians. An evaluation was required of the existing performance management system so that recommendations can be made to improve the existing practices and approach.

3.3.2. Objectives

The objectives of this research study were to encapsulate an understanding of CPM's performance management approach by focusing on the following:

- To examine the attitude and perception of technicians of the CPM Department within Eskom's Distribution KZN-OU towards performance management in general;

- To determine the technicians' attitudes towards the present appraisal system;

- To examine the effects of technician training, development, evaluation and reward on performance;

- To identify factors that influence performance management and to recommend improvements to the present performance management system to ensure it is designed for the purpose of achieving the company's goals, vision and values.

3.4.   PARTICIPANTS AND LOCATION OF THE STUDY

Creswell (2013) noted that true and relevant statements acquired by a participant through a survey instrument outlines information, statistics, figures, numbers, and evidence that demonstrates understanding and awareness.

Salmons (2011) stated that participants need to be identified with a clear purpose of the research study. Participants situated in different locations contribute information, data and statistics that would be collected in aggregate to fulfil the requirements of the study.

The participants in this study were CPM technicians who are geographically located in the areas of Margate, Empangeni, New Germany, Pietermaritzburg and Newcastle. These areas which are in the province of KwaZulu-Natal, South Africa are illustrated in Figure 3.1 below (Prepok, 2015). Eskom refers to this region as KwaZulu-Natal Operating Unit (KZN-OU).

Figure 3.1: Map of Eskom's KwaZulu-Natal Operating Unit

Source: Adapted from Prepok, D. 2015. Geographic Information Technician, Control Plant & Maintenance (CPM), Eskom. KwaZulu-Natal: Email correspondence regarding KZN-OU Map for CPM Technicians, 17 November.

The areas depicted in Figure 3.1 show a work base from which CPM technicians operate. The CPM department has an umbrella of four disciplines under its operating wing – Protection, Tele-control, Metering and DC Systems. In terms of performance, these departments' core duties relate to asset creation, maintenance, ensuring continuity of supply and revenue measurement.

3.5.   PURPOSE OF THE STUDY

For an approach of research to be undertaken, an understanding is required of the different roles of exploratory, descriptive and casual. Zikmund, Babin, Carr and Griffin (2012) and Collis and Hussey (2013) concurred that exploratory research sets the foundation to assess information where no prior research has been conducted. Causal research employs experimental testing using a hypothesis method to determine "cause and effect

relationships" (Zikmund *et al*., 2012, p. 16). Descriptive research is achieved when attributes of individuals, objects, or organisations need to be described. This particular research used instruments such as questionnaires and surveys to acquire data from a group of people (Ary, Jacobs, Sorensen & Walker 2013). As the characteristics are descriptive in nature and known to the researcher, the current level of attitudes and perceptions of CPM technicians towards performance management had to be collected and assessed comprehensively.

Research methodology has mainly three approaches that are used to collect and analyse data. Creswell (2013) referred to these approaches as the quantitative, qualitative and mixed methods research, as shown in Table 3.1.

Table 3.1: Procedures for quantitative, qualitative and mixed methods research

Quantitative research methods	Qualitative research methods	Mixed methods research methods
• Close-ended, prearranged questions • Performance information • Attitude information • Observational information • Census information • Statistical analysis	• Emergent methods • Open-ended questions • Interview information • Observation data • Document facts • Audio-visual assessments • Text and image study	• Both pre-arranged and emergent methods • Both open- and close-ended questions • Numerous forms of information drawing on all opportunities • Statistical and text studies

Source: Creswell, J.W. 2013. *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.

As described in Table 3.1, it is beneficial to use a wide range of opportunities for data collection in research. Quantitative, qualitative and mixed methods research outline questions used in context of being prearranged, open or close-ended where the focus is on analysis of text or statistical data (Creswell, 2013).

Qualitative methods focus on participatory information acquired where well-ground theory, case studies and narratives are claimed through a constructivist or advocacy approach (Sekaran & Bougie, 2013). The mixed methods approach emphasises "pragmatic

knowledge claims, collection of both quantitative and qualitative data sequentially"
(Creswell, 2013, p. 21).

Punch (2013) stated that the whole concept of quantitative research involves creating concepts and evaluating variables of a positivistic nature. The quantitative method focuses on requirements of effectiveness, authenticity, observation and calculation of numeric data, usage of neutral methods as well as applying statistical practices, as suggested by Bryman and Bell (2015). The approach that aligns well with this particular study is a descriptive and quantitative approach that would be used to establish and describe characteristics relating to performance management of CPM technicians in the KZN-OU.

3.6.   SAMPLING

Singh and Mangat (2013) stated that sampling is a process where information is collected from a slice of an entire population, to which a researcher is able to examine and make inferences about. It may be impractical to survey an entire population. Hence, the benefits of sampling are of saving time and cost, and it provides timeous feedback of results and a greater accuracy of results (Levy & Lemeshow, 2013).

3.7.   DESCRIPTION OF POPULATION

Haber (2014) described a population as complete group whose interests are well-defined and of specific properties, while a single member of the group is defined as an element. Sekaran and Bougie (2013) pointed out that a researcher may want to make interpretations or inferences of a population by using a sample.

The group of interest in this study comprised Eskom's CPM technicians that form part of a specialised maintenance department. The total population for this study consisted of 90 elements. Each element represented a technician of the CPM department in the Eskom KZN-OU. The total population of 90 represents the CPM technicians as of 1 January 2015. The decision in this study was to survey the entire population of CPM technicians in KZN-OU. The defined and specific roles of CPM technicians consist of commissioning (new-build) of Eskom assets (e.g. substations), maintenance of these assets and attending on-call duties during an emergency of equipment breakdown. These technicians have a direct interest in the department's performance through tasks they perform. They have been highly critical on performance objectives, training and development and employee evaluations in the past.

3.7.1. Population database

The complete list of elements was an existing database in the population which was to be studied. Such a database must have three characteristics to be evaluated by the researcher, as listed by Saunders, Lewis and Thornhill (2009) and Fowler Jr (2013) below:

- Comprehensiveness – a complete database
- Information must be accurate
- Information must be relevant (not outdated).

The population for this study was extracted from Eskom CPM database which had a list of CPM technicians as at 1 January 2015. The researcher requested CPM supervisors to send an updated list of email addresses of CPM technicians that related to the database. This ensured correct email addresses were used in the survey instrument and it listed CPM technicians that were still part of that discipline (i.e. not transferred out, promoted out of department or had resigned). This also ensured that correct email correspondent names were used for the survey instrument (i.e. if two participants had the same names, the correct one for the specific discipline was verified for use).

3.8. DATA COLLECTION STRATEGIES

An appropriate data collection strategy is essential to ensure that data for research is collected timeously, adequately and ethically. O'Leary (2013) stated that primary and secondary data collection encapsulates a major part of a collection strategy. Surveys, interviews and observations form part of primary data and secondary data consists of documents, datasets and online statistical information (Denscombe, 2014).

The primary data represented in the study served as information that relates to the evaluation of CPM's performance management. With the type of approach being a quantitative descriptive one, a survey was deemed as the most appropriate method for this study. This survey was conducted by means of a questionnaire of which the advantages and disadvantages are explained in Table 3.2.

Table 3.2: Advantages and disadvantages of a questionnaire

Data collection method	Advantages	Disadvantages
Questionnaires	• Cost effective method • Coverage is wide and inclusive • Response feedback is instant	• Low response rate from email/web-based questionnaire • Excludes respondents without internet or email

Source: Adapted from Denscombe, M. 2014. *The good research guide: for small-scale social research projects*. McGraw-Hill Education, UK.

Table 3.2 identifies the questionnaire as an efficient and appropriate method for CPM technicians. This method illustrates the benefits listed below:

- CPM technicians are widely spread out in the geographical location (KZN-OU).
- A CPM email database exists that consists of the sample frame.
- CPM technicians have access to internet and a laptop.
- The questionnaire is a cost effective method to both the participants and the researcher.

With a small population size of 90, a quantitative survey for this study was an inexpensive and beneficial approach for describing or making inferences of larger groups. Observations and interviews would not have been an applicable method.

This study was self-administered, and the CPM technicians had to complete an electronic questionnaire using the web-based software, QuestionPro. The web-based survey is greatly supported due to its distinct features available to the researcher. Denscombe (2014) stated that web-based survey software inclusively allows the following:

- Design of the questionnaire
- Circulation of the questionnaire
- Retrieval of the data.

3.8.1. Construction of the instrument

Denscombe (2014) pointed out that questionnaires are prone to a low response rate. For this study, the researcher provided the participants with a covering letter that described the study and its objectives. This letter assured anonymity and confidentiality of the

respondent. The questionnaire had a logical flow of demographical to objective questions, which was designed to acquire data from CPM technicians towards performance management.

The design of the questionnaire consisted of questions (provided in Appendix 1) that linked to objectives of the study, as shown in Table 3.3.

Table 3.3: Linkage of questions to objectives

Section	Objective	Question Number
1	To examine the attitude and perception of technicians of the Control Plant Maintenance Department within Eskom's Distribution KwaZulu-Natal Operating Unit towards performance management in general.	9,10,11,12,13
2	To determine the technicians' attitudes towards the present appraisal system.	14,15,16,17,18
3	To examine the effects of technician training, development, evaluation and reward on performance.	19,20,21,22,23,24,25
4	To identify factors that influence performance management and to recommend improvements for the present performance management system so as to ensure that it is designed for the purpose of achieving the company's goals, vision and values	26,27,28,29,30,31

The design of the questions linked to objectives in Table 3.3 provided information about the study required for effective decision-making. Content, construct, and criterion-related validity had to be maintained in its design such that words were correctly worded, it contained no ambiguity, was of appropriate length, and was free of leading or loading questions, as suggested by Sekaran and Bougie (2013).

The questions of the study were designed with four types of scales. De Vaus (2013) referred to these levels of measurement as the interval, ordinal, nominal and the ratio scales. Exhaustiveness and exclusiveness were applied in designing these questions, where exhaustiveness relates to a question having sufficient range (e.g. single, married, or divorced, as compared to only single or married). Exclusiveness relates to only one answer being allowed from the respondent (De Vaus, 2013). Interval scales were used typically in

the form of choices that allowed for statistical calculations. Nominal scales allowed the researcher to assign participants to specific groups (e.g. gender or race). The ordinal scale relates to ranking and the ratio scale allows comparison of variance between values. Table 3.4 illustrates the different scales used in this study with reference to questions included in Appendix 1.

Table 3.4: The types of scales used in the questionnaire

Scale	Type	Data type	Question
Rating	Multiple choice single response	Nominal	1,3,4,6,7
	Likert scale	Interval	9,10,11,12,13,14,15,16, 17,18,19,20,21,22,23,24, 25,26,27,28,29,30,31
	Multiple choice single response	Ratio	2,5
Ranking	Forced choice	Ordinal	8

Table 3.4 demonstrates the spread of questions to the various scales used. The variety of scales contributed to making the observations significant and data obtained rich and meaningful. The survey was designed with impressive features of designing questions of text, matrix tables, and multiple-choice attributes. The software enabled the researcher to design smart surveys which created depth in responses, and also allowed participants to respond on laptops, tablets or cell phones (Questionpro, 2015).

3.8.2.   Validity and reliability

Denscombe (2014) stated that the tests of validity and reliability are to ascertain that statistical data is a true reflection of the survey and not of the researcher's predisposition or bias. It is therefore essential that validity and reliability tests be done to determine that the study has indeed been accurately represented in the data.

3.8.2.1. Validity

Bryman and Bell (2015) defined validity as a concern where a set of indices that is supposed to measure a concept really reflects that concept or not. Face validity, concurrent,

predictive, construct and convergent validity are the numerous ways validity can be discussed.

For this study, the concepts of face (content) validity, concurrent (criterion) and construct validity were of interest. Content validity can be achieved by just asking other people whether the statistics are reflective of the concept or objective of the study. Bryman and Bell (2015) stated that criterion validity can best be described in an example where absenteeism may be a criterion to measure job satisfaction. If results indicate that absenteeism does not contribute to job satisfaction, we may question that criterion. Construct validity relates to a relationship of theory being relevant to a concept (e.g. job routine and its relationship to job satisfaction). The disadvantage of this is that theory may be misguided, or job routine may not be a valid concept to measure.

In relation to this study, content validity feedback was obtained from feedback of the supervisor of this study, and managers and supervisors of the CPM department. The study consisted of criterion variables such as appraisals and standby-by duties to ensure concurrent validity while correlation analysis established the construct validity.

3.8.2.2. Reliability

Bryman and Bell (2015, p. 169) related reliability to the "consistency of measure of a concept". The authors related reliability to three factors – stability, internal reliability and inter-reliability. Inter-reliability relates to multiple rater bias existing in observations, which was not the interest of this study. Stability relates to a factor of time, where the questionnaire can be re-tested and a correlation assessed by the two observations. Bryman and Bell (2015, p. 169) related internal reliability to the "key issue whether or not the indicators that make up the scale are consistent".

Cronbach's alpha is a method that is most frequently used to test internal reliability. In relation to the study, the questionnaire could be tested using the Cronbach's alpha method to assess its internal relationship reliability to other questions. Bryman and Bell (2015) stated that a factor of 0,8 is an acceptable assessment of internal reliability.

3.8.3. Pretesting of questionnaire

Rubin and Babbie (2013) stated that it is imperative for a questionnaire to be pretested in a dry run with a small group of participants (under 10) to identify errors such as ambiguity, violation of rules of survey, or mistakes by the respondents.

A pilot test was applied to five CPM technicians and the following issues were raised by the test subjects and subsequently corrected:

1) Age demographic <18 years was identified. No CPM technician under the age of 18 was employed by Eskom and this information required consent of an adult if it remained on the questionnaire. This resulted in an amendment in the age demographic on the questionnaire, where the line indicating <18 was removed.

2) Spelling and grammatical errors were identified and amended.

3) A demographic of area was added to indicate the geographical location of respondents.

4) Validating a question (making it "required") on QuestionPro eliminated incomplete responses from being obtained.

5) The colour of the continue button was changed to red, after the consent page on the online questionnaire. The light blue colour for the continue button was not visible on some CPM technicians laptops

3.8.4. Administering of questionnaire

With the design changes implemented, the questionnaire was administered via a QuestionPro hyperlink to the survey questions. This link was sent via direct email to the Eskom CPM technicians in the KZN-OU. A cover letter was included in the email that motivated and encouraged the CPM technicians to participate. An incentive was introduced to encourage response rates and this was mentioned in the cover letter.

QuestionPro tracked all responses received for analysis. Four follow-up emails were sent to the participants, with three-day intervals between them. The survey was sent out to CPM technicians on 23 October 2015 and was closed off on 3 November 2015.

3.9. ANALYSIS OF DATA

The online software, QuestionPro, was the only medium for administering the questionnaire to the CPM technicians. All data collected by the electronic tool was stored in its own database to which the researcher had a secured password. The variables of the data on QuestionPro's database is numerically coded (Questionpro, 2015). A combination of QuestionPro's analysis of the data as well as a further analysis using the Statistical Package for Social Sciences (SPSS) software was made available to the researcher.

3.10. ETHICAL CONSIDERATIONS

A letter of consent was received from the CPM manager in KZN-OU, in order to conduct this research study (Appendix 3). A clearance letter obtained from the University of KwaZulu-Natal was granted with full approval (Appendix 2). An informed consent letter was acquired from all respondents prior to participating in the survey (Appendix 1).

3.11. CONCLUSION

The research methodology employed in acquiring results for the study has been discussed in this chapter. The discussion included the basic research design, the sampling and data collection strategies and the statistical techniques used to analyse the data. Ethical elements were also discussed in this chapter.

The extent to which the research questions were analysed required a descriptive study to understand CPM technicians' attitudes and perceptions towards performance management in the KZN-OU. A non-probability approach was followed with convenience sampling as the method employed to get information quickly and efficiently from CPM technicians.

The survey data collected for this research as per the required sample was analysed. These results are presented and discussed in the chapter that follows.

CHAPTER 4
PRESENTATION OF RESULTS

4.1. INTRODUCTION

The data collection method described in the previous chapter focused on acquiring data on Control Plant Maintenance (CPM) technicians in the Eskom KwaZulu-Natal Operating Unit (KZN-OU). The data that was accumulated is presented in this chapter in terms of descriptive and inferential statistics. The arrangement of data is presented in four sections, the first of which represents the demographic profile of the CPM technicians in the Eskom KZN-OU that participated in this research study. The second section presents the statistical results related to the objectives of the study as described in Chapter 3. Team performance data is presented thereafter and is concluded by an inferential statistical tabulation in relation to performance management.

The original count of 90 CPM technicians was reduced due to two technicians being transferred out of the department. Eighty-eight (88) CPM technicians commenced a response to the online questionnaire, of which 61 (69%) CPM technicians completed it in full. The average time taken to complete the questionnaire was 10 minutes, which was well within the estimated time of 15 minutes. Data was submitted from various devices with 91% of the responses being from a laptop/desktop, followed by 5% on smartphones and 4% on tablets.

4.2. TREATMENT OF DATA

As the questions were all validated for completed responses, no uncompleted questionnaires were accumulated. Representations of the data are provided in this chapter by means of graphical figures and in table formats. All percentages have been rounded off. Descriptive and inferential statistics are used to present the data here. A variety of graphical figures are used to demonstrate the relationship of variables and tests of significance.

4.3. RELIABILITY OF THE QUESTIONNAIRE

The data extracted from QuestionPro was put into SPSS. Reliability tests showed that the data is reliable as the Cronbach's alpha values are 0.897 and 0.875 respectively for 23 items.

Table 4.1: Cronbach's alpha reliability tests

Reliability statistics	
Cronbach's alpha	Number of items
0.897	5
Reliability statistics	
Cronbach's alpha	Number of items
0.875	18

4.4. DEMOGRAPHIC PROFILE OF RESPONDENTS

The demographic profile of the respondents was Control Plant Maintenance (CPM) technicians who were geographically located in the Eskom KZN-OU. These demographics were representative of the following:

- Gender
- Age
- Race
- Task grading
- Work experience
- Discipline of work
- Area of work
- Qualification.

It was deemed unnecessary to analyse CPM technician participants by race, age or gender. It was assumed that the information gathered would be generalised to technicians that would feel the same way irrespective of race, gender or age.

4.4.1. Gender

Figure 4.1 displays gender distribution of 61 CPM respondents at Eskom's KZN-OU.
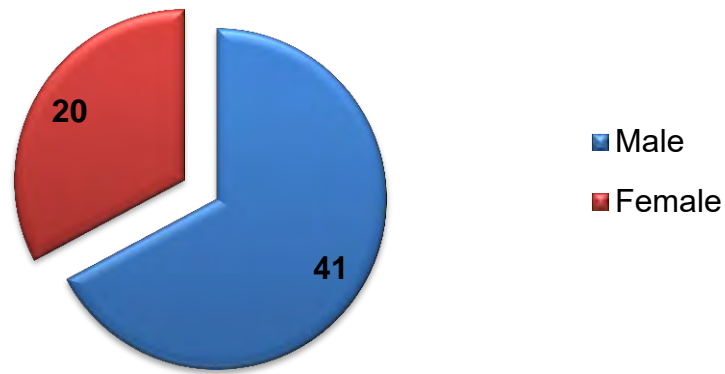
Figure 4.1: Gender distribution

About two-thirds (67%) of the participants were male, as illustrated in Figure 4.1.

4.4.2. Age

Figure 4.2 displays a distribution of the ages of 61 CPM respondents at Eskom's KZN-OU.

Age category of CPM technicians
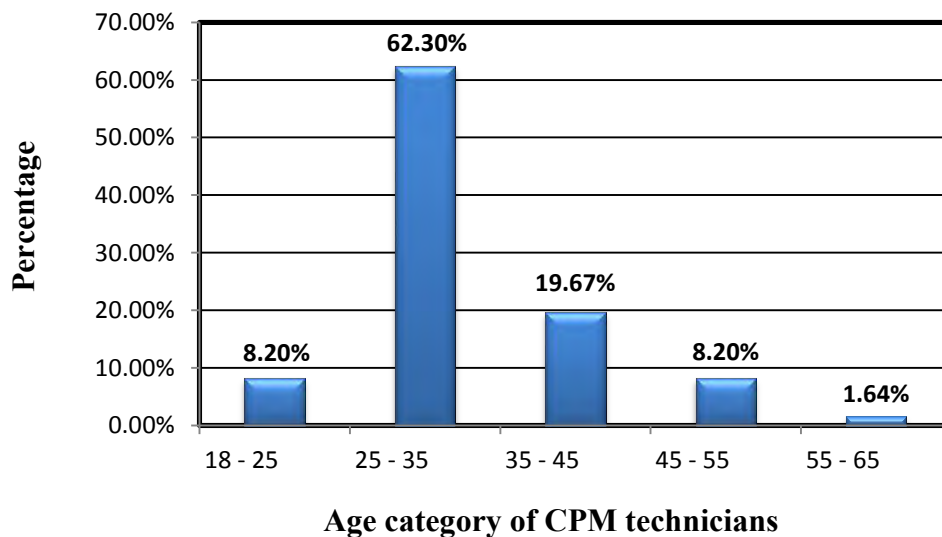
Figure 4.2: Participants' age distribution

With regards to participants' age, the survey revealed that more than two-thirds (71%) were younger than 36 years, as shown in Figure 4.2.

4.4.3. Race

Figure 4.3 is representative of the race of 61 CPM respondents at Eskom's KZN-OU.
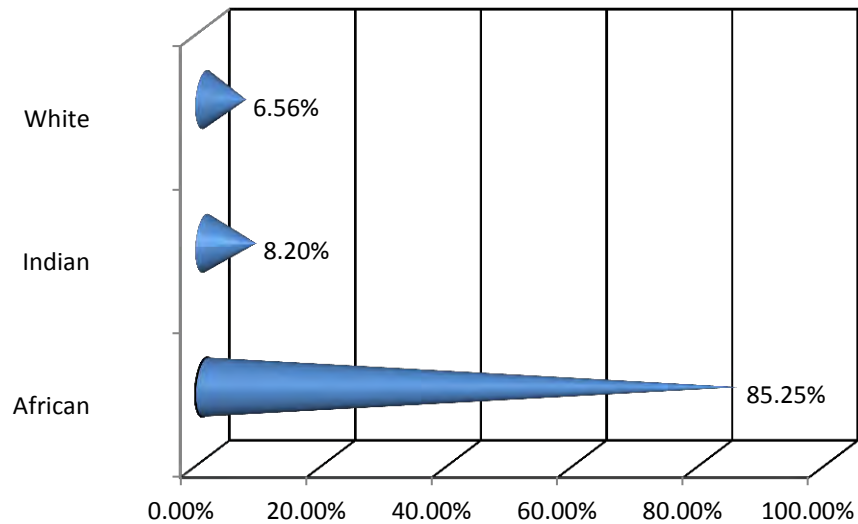
Figure 4.3: Distribution of race

Figure 4.3 shows that the majority of the participants were African (85%).

4.4.4. Task grade distribution

Figure 4.4 indicates the distribution of technicians (T11) and senior technicians (T12)
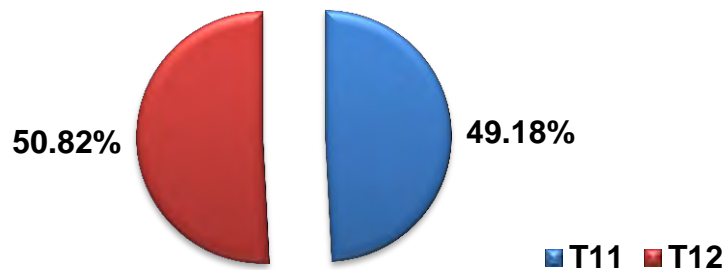
Figure 4.4: Distribution of task grading

Results show that 51% of the participants were from T11, as displayed in Figure 4.4.

4.4.5. Work experience distribution

Figure 4.5 illustrates the range of work experience distribution among CPM technicians.
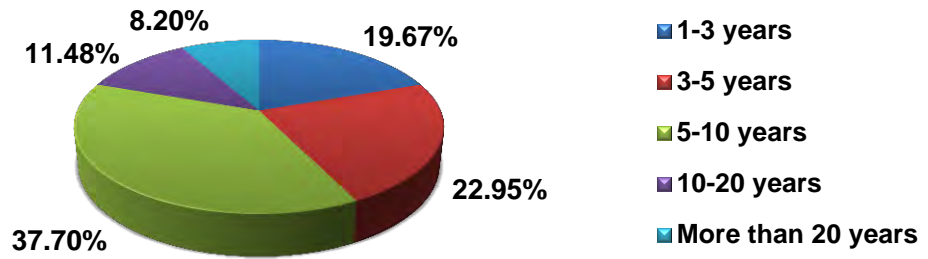
Figure 4.5: Years of experience

More than half of the participants (61%) had between three years and 10 years of experience, as shown in Figure 4.5.

4.4.6.　Discipline of work distribution

Figure 4.6 displays the spread of 61 CPM respondents into their respective disciplines.
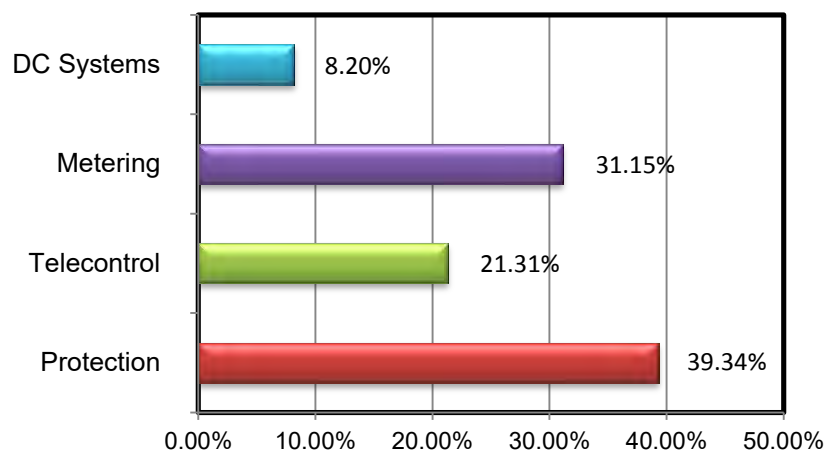
Figure 4.6: Representation of work disciplines

More than a third (39%) of the respondents were working in the Protection unit, followed by the Metering unit (31%), as shown in Figure 4.6.

4.4.7.　Area of work distribution

Figure 4.7 displays the various areas where the CPM respondents are based.
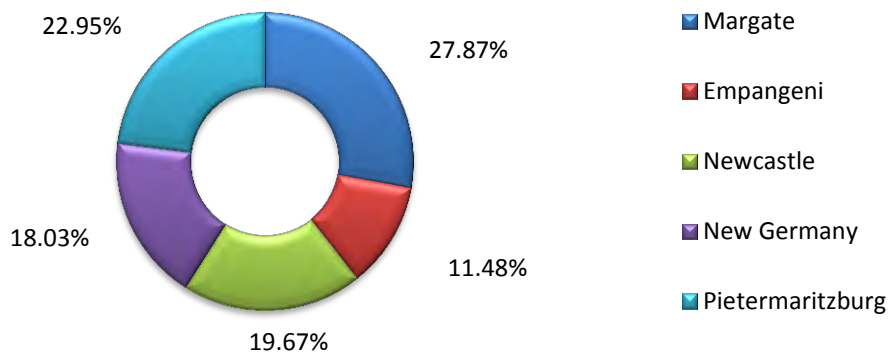
Figure 4.7: Area of work bases

More than a quarter (28%) of the participants were from Margate, followed by Pietermaritzburg (23%) and Newcastle (20%) respectively, as shown in Figure 4.7

4.4.8. Qualification distribution

Figure 4.8 displays the levels of qualification of CPM respondents.
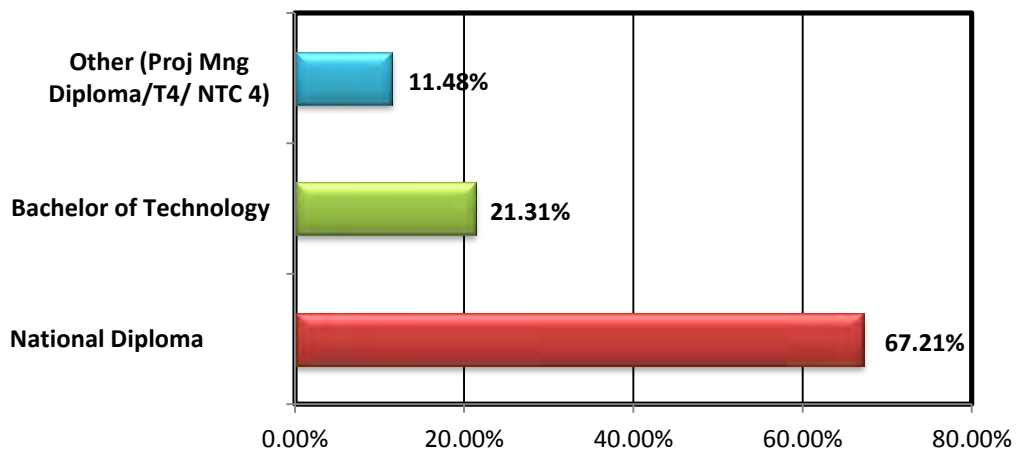
Figure 4.8: Education level of the participants

With regard to participants' education, 67% had a national diploma, as shown in Figure 4.8.

4.5.   OBJECTIVE 1: ATTITUDES AND PERCEPTIONS TOWARDS PERFORMANCE MANAGEMENT

Figure 4.9 displays statistics of attitudes and perceptions of CPM respondents to performance management in general.
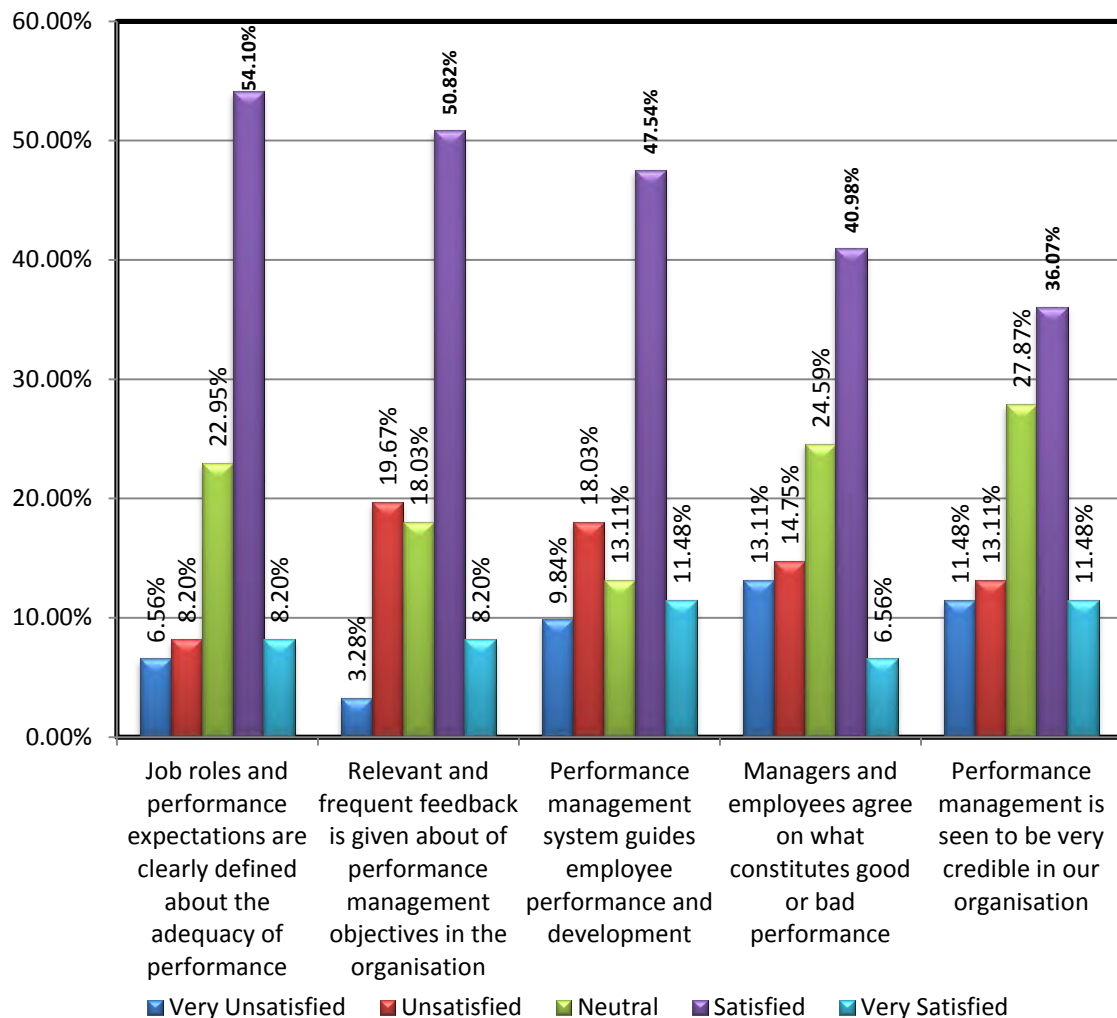
Figure 4.9: Summary of responses concerning management performance

Figure 4.9 shows the summary of the statements regarding performance management. It was found that more participants are satisfied or very satisfied with all five statements. For example, 54% agreed that job roles and performance expectations are clearly defined about the adequacy of performance, and just 36% indicated that they were satisfied with the statement 'performance management is seen to be very credible in our organisation'. Fifty-nine percent of the respondents responded favourably to the statement regarding relevant and frequent feedback. The levels of satisfaction are not optimal amongst CPM technicians.

4.6. OBJECTIVE 2: ATTITUDES TOWARDS PERFORMANCE APPRAISALS

Figure 4.10 displays statistics with regards to CPM respondents' attitudes towards performance appraisals.
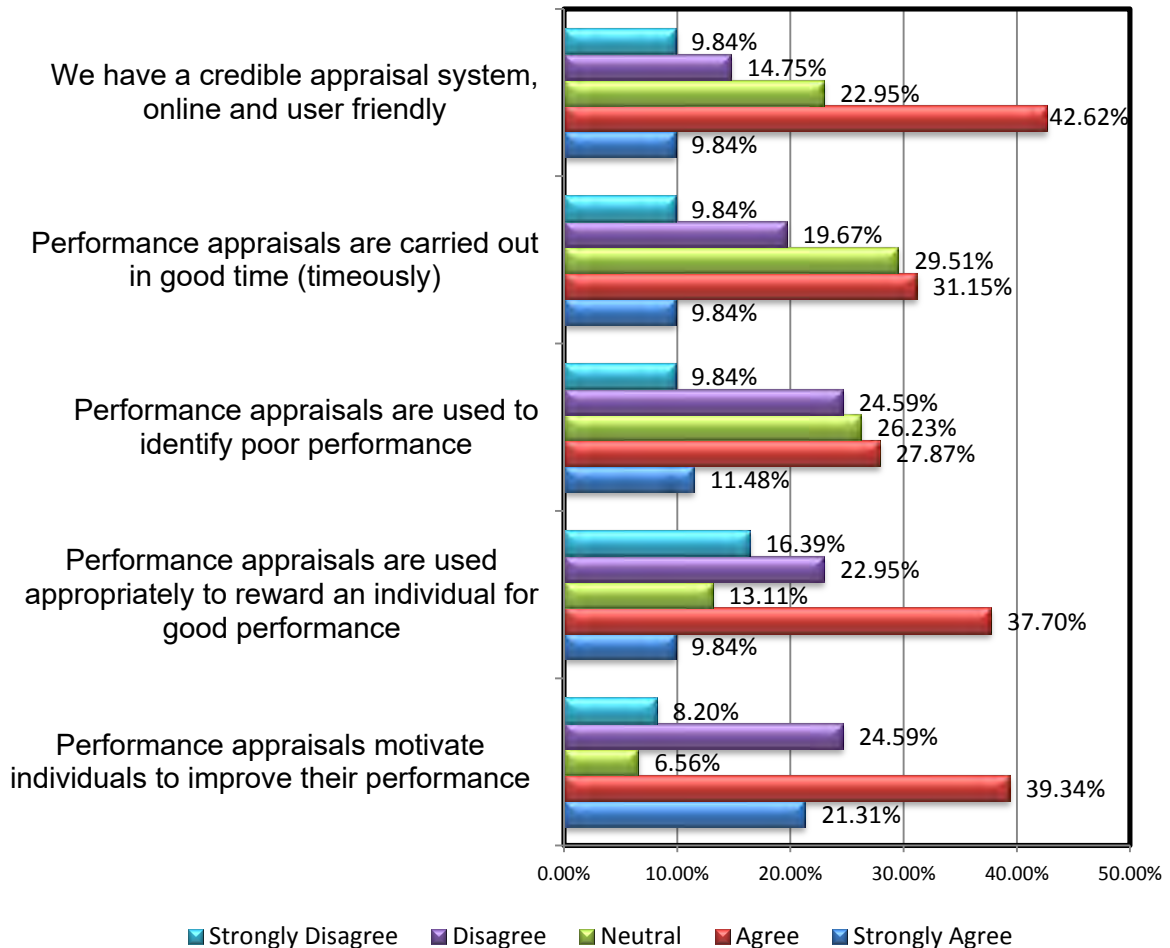
Figure 4.10: Summary of performance appraisal statements

Concerning performance appraisals, more participants agreed or strongly agreed to all seven statements. Results in Figure 4.10 show that 43% of respondents agreed and 10% strongly agreed that they have a credible appraisal system, online and user friendly, whilst 61% highlighted positively that performance appraisals motivate individuals to improve their performance. Although statistics reveal that CPM technicians are reasonably satisfied with performance appraisals, the levels of satisfaction are not optimal.

4.7.   OBJECTIVE 3: TRAINING DEVELOPMENT, EVALUATION AND REWARD

Figure 4.11 displays statistics of training, development, evaluation and reward.
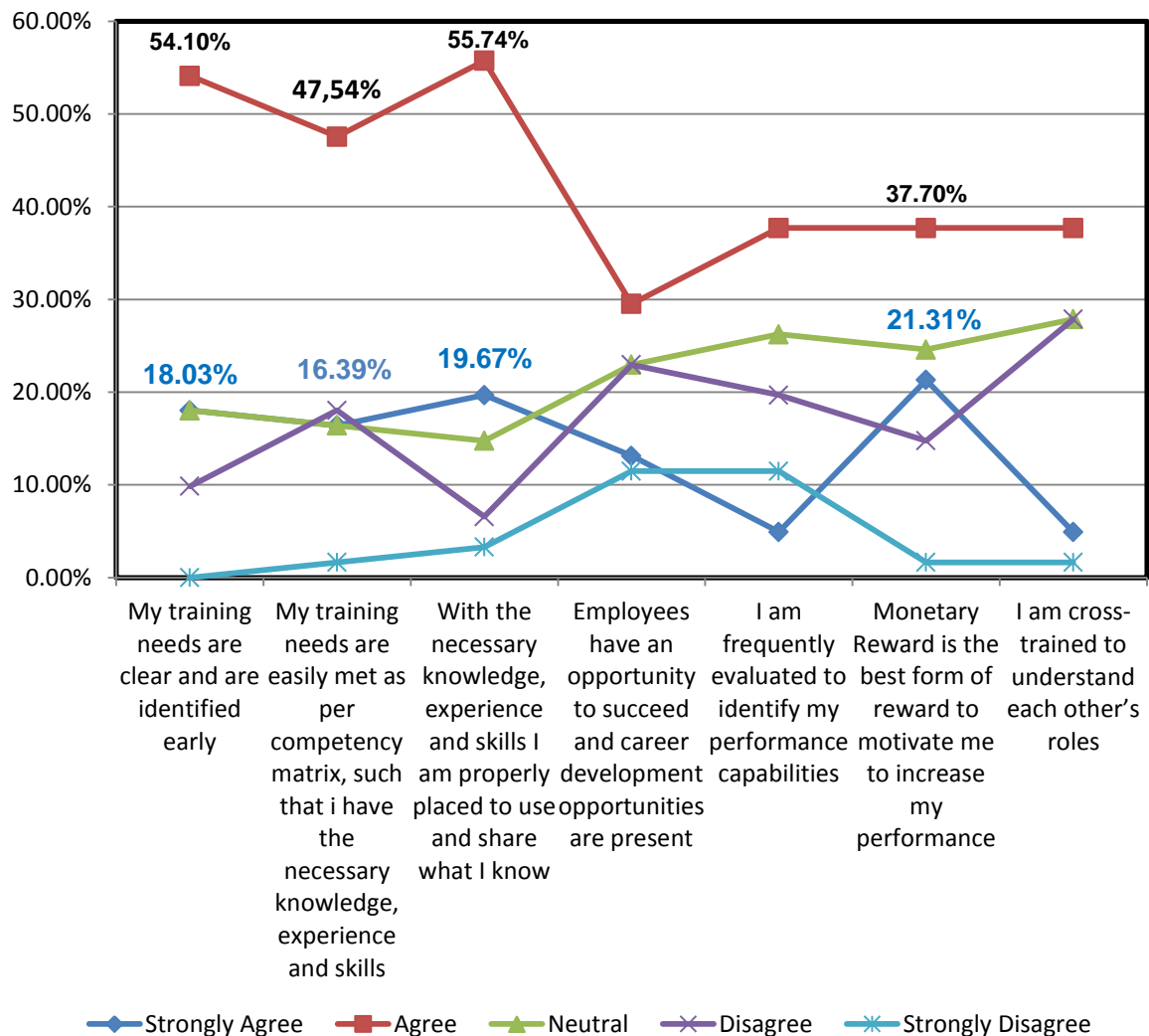
Figure 4.11: Summary concerning Training Development, Evaluation and Reward

There were seven statements posed to the participants to evaluate training, development, evaluation and reward in the company, as shown in Figure 4.11. Results show that more than half of the participants agreed to the following statements: With the necessary knowledge, experience and skills I am properly placed to use and share what I know (56%), and my training needs are clear and are identified early (54%). It was highlighted by 59% of the participants that monetary reward is the best form of reward to motivate them to increase their performance. Only 43% responded favourably to the statement that

they are cross-trained to understand each other's roles. Most respondents indicated that they are generally content with training development, evaluation and reward.

4.8. OBJECTIVE 4: FACTORS THAT AFFECT PERFORMANCE MANAGEMENT

Figure 4.12 displays statistics on factors of performance management.
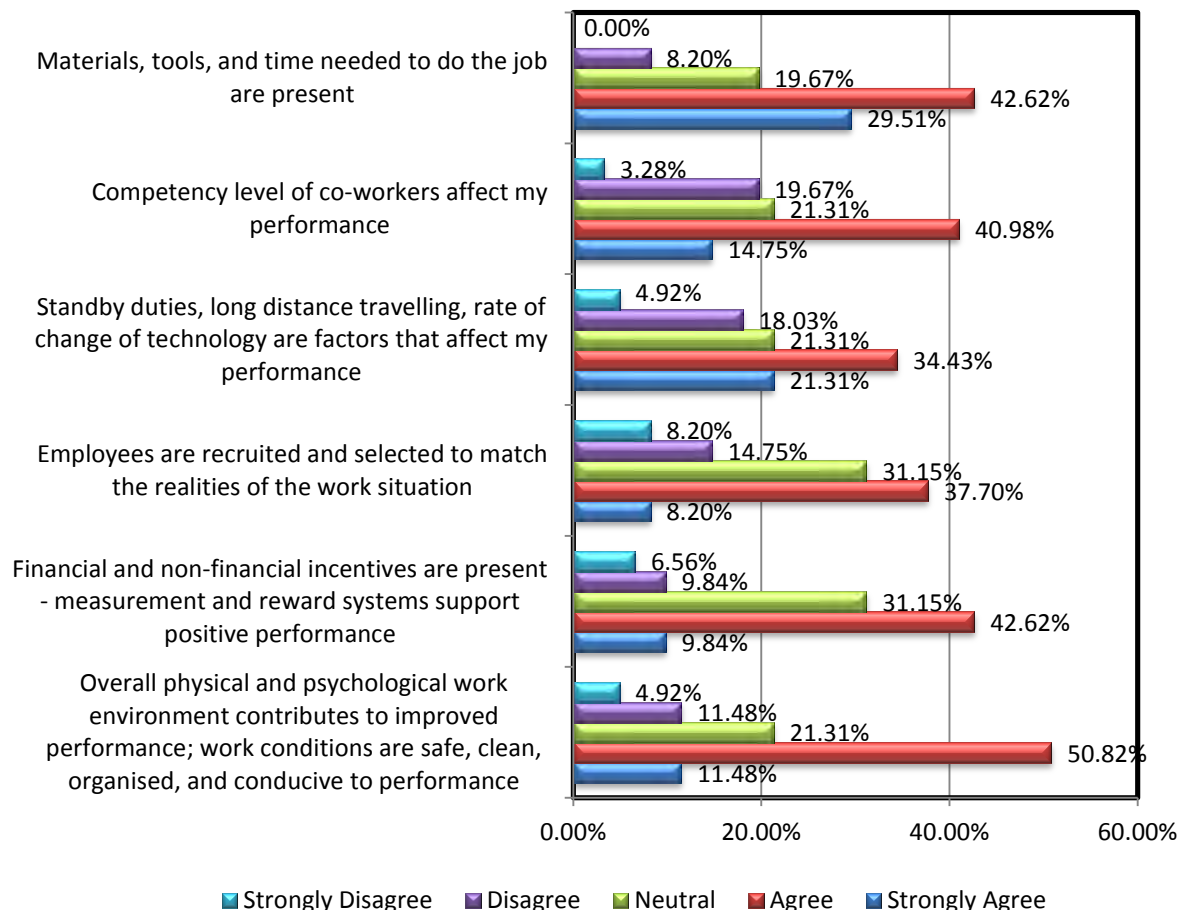
Figure 4.12: Factors that affect performance management

Participants were asked to identify factors that could affect performance management in the company, as shown in Figure 4.12. Materials, tools, and time needed to do the job are present was the most significant factor as 30% strongly agreed to this statement, followed by 21% who strongly agreed that standby duties, long distance travelling, rate of change of technology are factors that affect their performance. Most respondents have agreed with these statements.

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4.9.   TEAM PERFORMANCE DATA PRESENTATIONS

The following statistics focus on analysis of the various disciplines and their responses to standby-duties, long distance travelling, rate of change of technology, and task grading, education levels, training needs, and competency of co-workers.

4.9.1.   Standby duties, long distance travelling, and rate of change of technology affecting performance disciplines

Figure 4.13 rates the statement of standby duties, long distance travelling and rate of change of technology affecting performance, amongst the various disciplines.
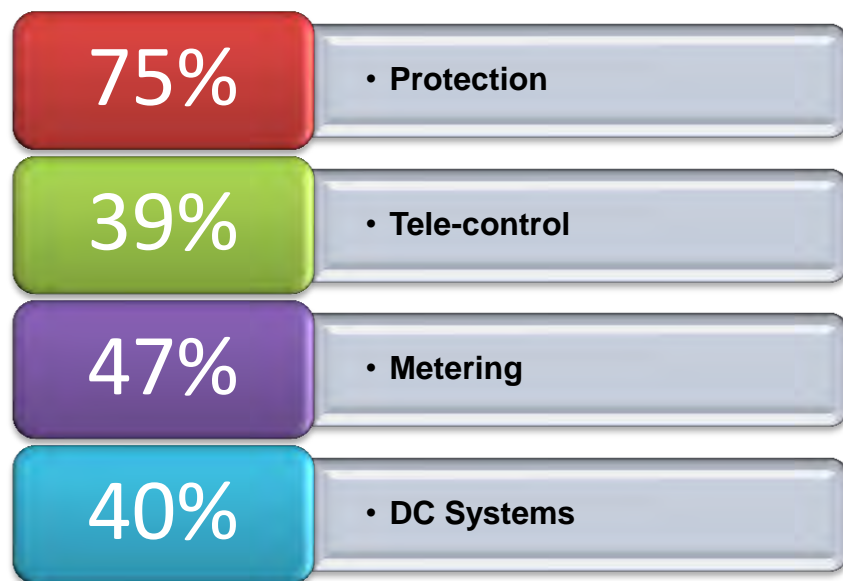
Figure 4.13: Discipline agreement on standby duties, long distance travelling and rate of change of technology

As shown in Figure 4.13, 75% of Protection Technicians agree that standby duties, long distance travelling and rate of change of technology affect performance. The remaining department show lower levels of agreement to that statement. This implies that most Protection technicians are most aggrieved with standby duties, long distance travelling and the rate of change of technology affecting their performance.

4.9.2.   Distribution of task grading amongst disciplines

Figure 4.14 displays the distribution of technicians and senior technicians amongst the various disciplines.
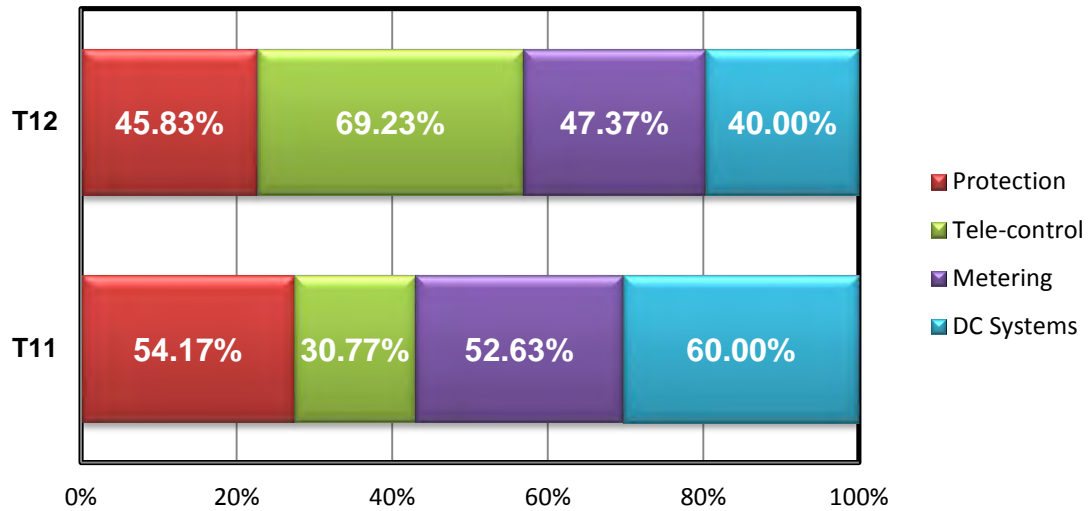
Figure 4.14: Task grading distribution amongst disciplines.

The Tele-control discipline has the highest number (69%) of senior technicians at grade T12 and the DC Systems discipline has the highest number (60%) of technicians at grade T11, as illustrated in Figure 4.14.

4.9.3. Distribution of qualification amongst disciplines

Figure 4.15 introduces the spread of qualifications amongst the disciplines.
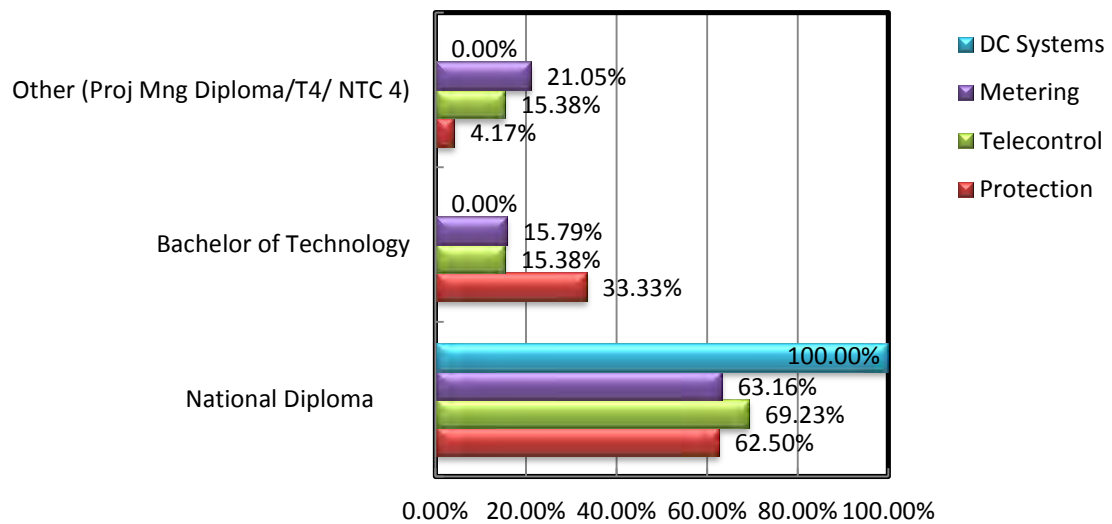
Figure 4.15: Qualification spread amongst disciplines

Figure 4.15 demonstrates that protection technicians have the most (33%) Bachelor of Technology qualifications. Tele-control has the lowest (15.38%) number of Bachelor of Technology qualifications. DC Systems technicians only possess National Diploma Qualifications.

4.9.4. Training needs being met in various disciplines

Figure 4.16 rates the statement of "My training needs are easily met as per competency matrix, such that I have the necessary knowledge, experience and skills" amongst the various disciplines.

50%	• Protection
62%	• Tele-control
79%	• Metering
100%	• DC-Systems
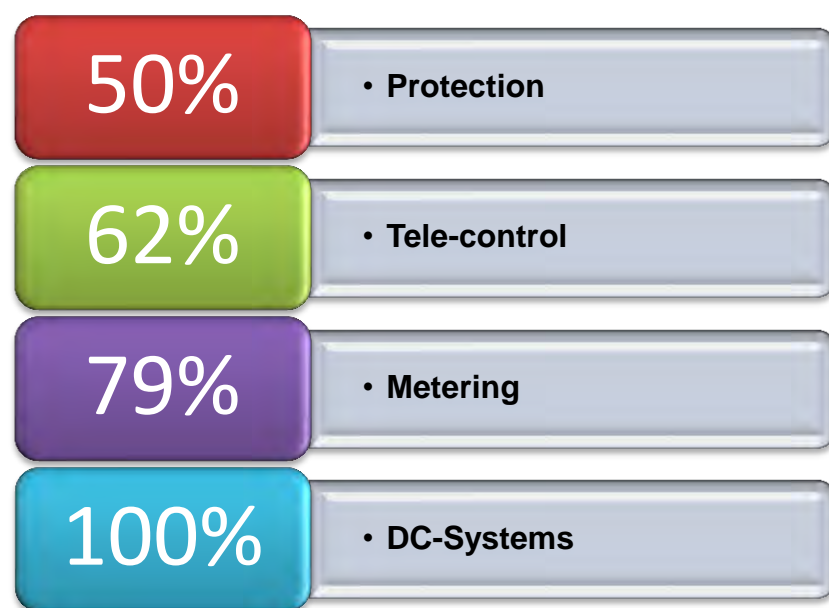
Figure 4.16: Discipline agreement on training needs easily met by competency matrix

As shown in Figure 4.16, only 50% of Protection technicians stated that their training needs are met easily as per their competency matrix. DC Systems are 100% in agreement that their training needs are met as per their competency matrix.

4.9.5. Competency level of co-workers affect my performance

Concerning the different levels of co-worker competency, the responses from the different disciplines are highlighted in Figure 4.17.
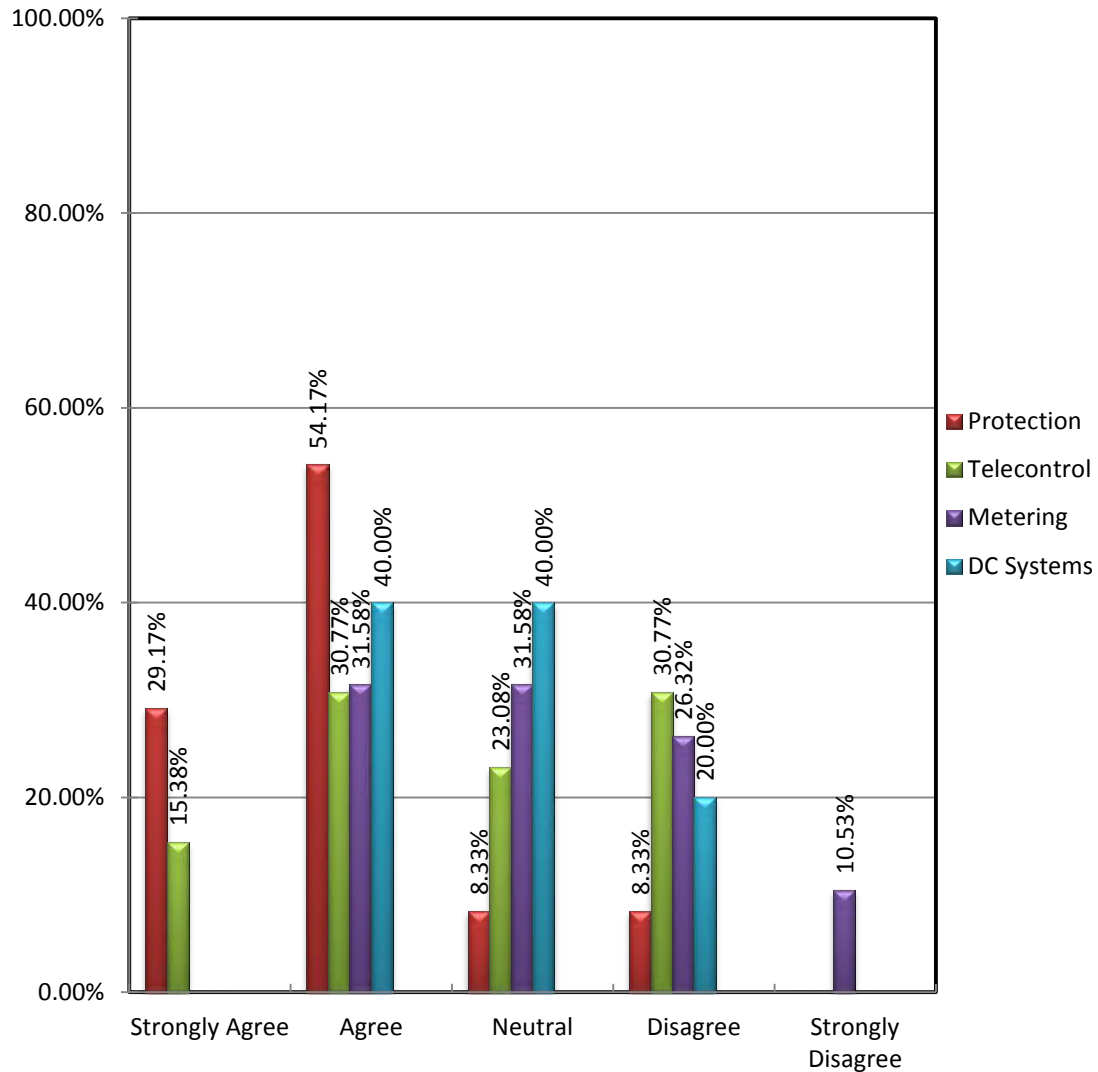
Figure 4.17: Discipline agreement on competency level of co-workers affecting performance

Figure 4.17 shows that 83% of Protection Technicians agreed that levels of competency amongst co-workers affect performance. Only 32% of Metering, 46% in Tele-control and 40% in DC Systems Technicians agreed with this statement.

4.9.6. De-concentration of discipline in the areas

Figure 4.18 illustrates statistics of the concentration levels in the geographical areas.
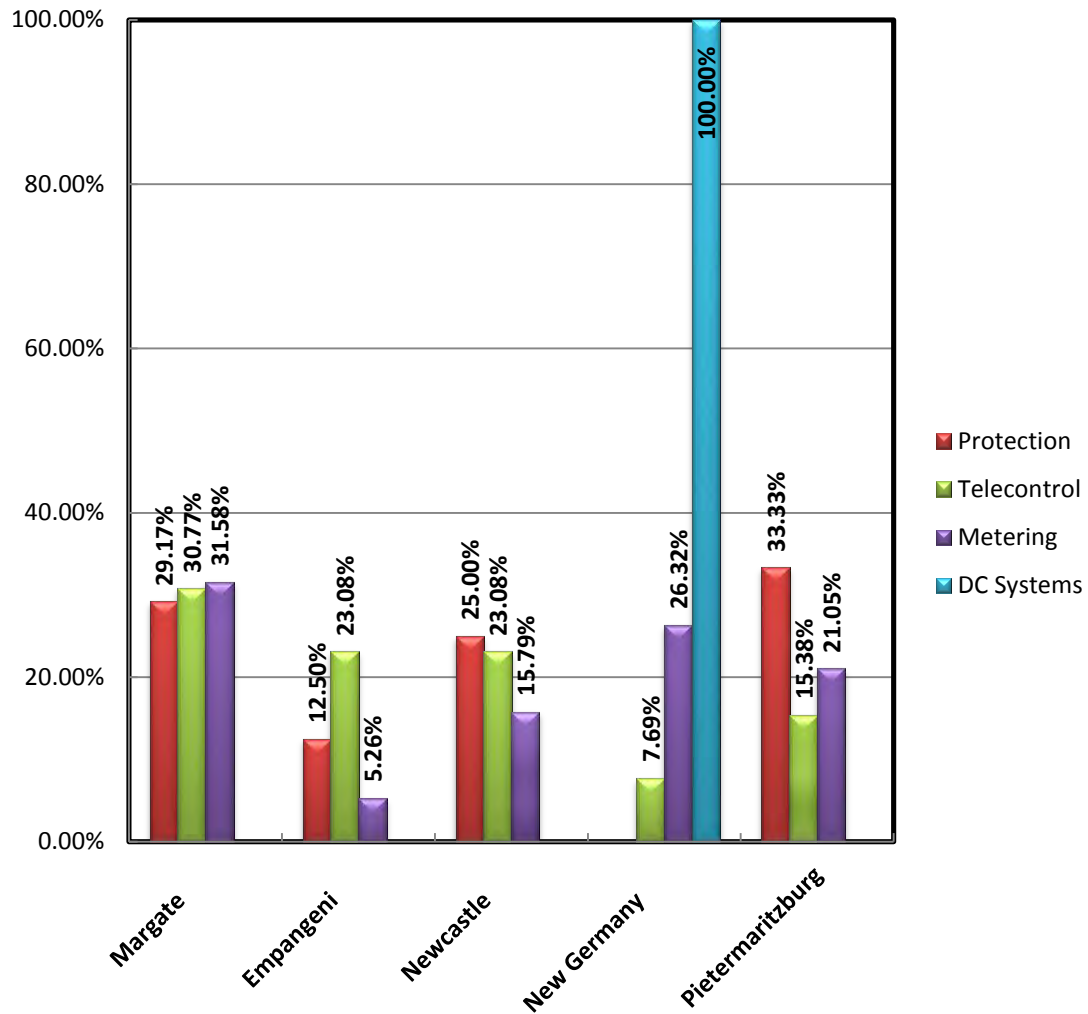
Figure 4.18: Discipline concentration statistics in the areas

All disciplines are based in the outlying areas of KwaZulu-Natal, except DC Systems which are 100% based in New Germany. As the New Germany area has no work relating to the Protection, no Protection Discipline is established in New Germany.

4.10. PEARSON CORRELATION ANALYSIS PERFORMANCE, APPRAISAL, TRAINING, AND FACTORS OF PERFORMANCE

Table 4.2 introduces a Pearson's correlation analysis which displays the relationships of Performance, Appraisal, Training and Factors of Performance with each other.

Table 4.2: Correlation between Performance, Appraisal, Training, and Factors

		Performance	Appraisal	Training	Factors
Performance	Pearson Correlation	1	-.739**	-.661**	-.320*
	Sig. (2-tailed)		.000	.000	.012
	N	61	61	61	61
Appraisal	Pearson Correlation	-.739**	1	.779**	.510**
	Sig. (2-tailed)	.000		.000	.000
	N	61	61	61	61
Training	Pearson Correlation	-.661**	.779**	1	.506**
	Sig. (2-tailed)	.000	.000		.000
	N	61	61	61	61
Factors	Pearson Correlation	-.320*	.510**	.506**	1
	Sig. (2-tailed)	.012	.000	.000	
	N	61	61	61	61
** Correlation is significant at the 0.01 level (2-tailed).					
* Correlation is significant at the 0.05 level (2-tailed).					

Pearson correlation analysis showed that performance was significantly negatively correlated with appraisal ($p < 0.01$), training ($p < 0.01$), and factors ($p = 0.012$). This meant that participants with a higher score on performance had a low score on appraisal, training, and factors. It was also found that appraisal was significantly positively correlated with training ($p < 0.01$) and factors ($p < 0.01$), as shown in Table 4.2.

4.11. CONCLUSION

The data collected from the CPM technicians via the research instrument has been presented in this chapter. Reliability of the questionnaire was verified at the outset and thereafter followed by presentation of the demographic data. The 61 respondents were represented in frequency and percentages on various graphical figures. Explanations of key data using descriptive statistics were highlighted on the various figures and graphs. Colour

was used to differentiate the many variables of demographic giving distinct and clear graphical appearances. Statistics of the objectives were presented, followed by team performance presentations and was concluded by a Pearson correlation regarding performance.

The analysis and discussions of these presentations are presented in the next chapter. The discussion of the findings will also summarise how research objectives have been met. Discussion, limitations and recommendations are also discussed in the next chapter.

CHAPTER 5

DISCUSSION, LIMITATIONS AND RECOMMENDATIONS

5.1. INTRODUCTION

The presentations of descriptive and inferential statistics presented in the previous chapter are analysed and discussed in this chapter. The analysis of the reliability of the questionnaire, the demographic profiles of respondents and the analysis of the objectives are then presented. Further analyses are presented by cross tabulations of the CPM disciplines to various factors that affect performance. This will highlight gaps within the CPM disciplines when compared to the general findings of respondents' statistics as a whole. Comparisons from literature are used to support the findings. The discussion concludes by linking objectives to key findings, evaluating findings and providing a summary of the performance evaluation linkages.

Limitations to the study are also presented in this chapter and then valid, practical and relevant recommendations are made on improving performance management in the CPM. The chapter concludes with recommendations for future studies and further research. The data for these recommendations emanated from the findings, limitations and problems identified in this study.

5.2. RELIABILITY OF THE QUESTIONNAIRE

The questionnaire was found to be reliable as per the Cronbach's alpha method where SPSS generated statistics of 0.897 (N=5) and 0.875 for (N=18), as shown in Table 4.1. Having two tests done for Cronbach's alpha affirms reliability. Bryman and Bell (2015) stated a factor of 0.8 is an acceptable assessment of internal reliability.

5.3. DEMOGRAPHIC PROFILE OF RESPONDENTS

The demographic profile of the respondents included technicians that were employed by the Distribution Sector of Eskom in the KwaZulu-Natal Operating Unit. These respondents fell under the umbrella of the Control Plant Maintenance Department and were separated by various disciplines (Protection, Tele-control, metering and DC Systems) in which they worked. As mentioned in Chapter 4, it was considered unnecessary to analyse CPM technicians by gender or any other human attributes. The broad assumption is that

employees would feel the same towards PM irrespective of their race, age or gender. The relevant demographic interpretation and analysis are detailed below.

5.3.1. Task grading

The CPM department appointed technicians in the positions of a technician (graded T11) or a senior technician (graded T12), as shown in Figure 4.4. The responses from the CPM department indicated that 51% of technicians were graded T11 and the remaining 49% were graded T12. Sixty percent (60%) of T12 respondents were found to be in the tele-control department, as shown in Figure 4.14. This implies that recruitment of senior technicians (new appointments or career advancements of T11) has seen a great availability of resources in the tele-control department. In their studies of how job resources predict work performance, Barbier *et al.* (2013) suggested that when more resources are available, better engagement of employees is achieved. Alonso and Mo's (2014) literature on employee engagement suggested that there are higher levels of performance, commitment and loyalty with engaged employees.

5.3.2. Levels of experience

The levels of experience of CPM technicians range from one year to more than 20 years of work experience. More than half (61%) of the participants have work experience of between three years and 10 years, as shown in Figure 4.5. This implies that a large amount of work experience greatly benefits performance in an organisation, where employees forge relationships with their co-workers. In assessing team work competence, studies by Nadal *et al*. (2015) revealed that organisations create larger profits when employees work as a team rather than working alone. Furthermore, the authors noted that most job-related difficulties are resolved through work team meetings.

5.3.3. Areas of work

The representation of technicians amongst the different disciplines and the areas where they reside is important to understand. The dispersal of respondents gives an understanding of where work duties are performed. The majority of respondents came from Protection (39%) and Metering (31%), as displayed in Figure 4.6. Tele-control and DC Systems were also well represented, despite the fact that they are relatively smaller disciplines. Respondents represented the areas of Margate (28%), Empangeni (12%), Newcastle (20%), Pietermaritzburg (23%) and New Germany (18%), as shown in Figure 4.7. All of

the respondents were de-concentrated into these areas except DC Systems (8%), shown in Figure 4.6, of which the total respondents are centrally-based in New Germany, as shown in Figure 4.18. In keeping with the Human Resource (HR) Policy, response times to callout duties are better when employees reside in the area of work. This is supported by Ziebertz *et al.'s* (2015) studies on the relationship of on-call work with fatigue, as they pointed out that employees have to stay in a close radius to the workplace for the purpose of emergency work.

5.3.4.   Qualifications

For employees to be employed as a technician the minimum qualification is a National Diploma for a Technician and a Bachelor of Technology degree for senior technicians as per HR policy. Sixty-seven percent of the technicians indicated they have National Diplomas and 21% have Bachelor of Technology degrees as their highest qualification, as shown in Figure 4.8. The statistics have revealed that the protection technicians have the highest number (33%) of Bachelor of Technology qualifications, and Tele-control has the lowest number (15%) of Bachelor of Technology qualifications, as shown in Figure 4.14. DC Systems technicians only possess National Diploma Qualifications. Studies of VuŢĂ and FĂRcaŞ (2015) on the role of training in organisational and employee development, reveal that developing employees professionally and personally is vital for contribution to an organisation's performance. With 88% of technicians in possession of required qualifications, as shown in Figure 4.8, it implies that the CPM department has a high concentration of professionally qualified technicians in the business.

5.4.   ANALYSIS OF THE OBJECTIVES

It was essential for the analysis of the objectives to be done to give a firm interpretation and understanding of how performance management is received by CPM technicians. The analysis of performance appraisal, training and development, evaluation, reward and various factors that contribute to the CPM department's performance had to be interpreted. This would determine whether survey data associated with the objectives of this study.

5.4.1.   Objective 1: CPM technicians' attitudes and perceptions towards performance management

To determine whether performance management in the CPM department is appropriate, respondents' attitudes and perceptions were tested. Respondents had to reply to five

statements to this objective. It was found that more participants were satisfied or very satisfied regarding all five statements, as shown in Figure 4.9.

With the first statement, 54% agreed and 8% strongly agreed that job roles and performance expectations are clearly defined. This is in keeping with the employees' individual development plans and the discipline accreditation process present in the CPM department. Barrick *et al.'s* (2013) studies on theory of purposeful work behaviour stated that when job roles and performance expectations are clearly defined, an employee feels motivated and their behaviour aligns to that of performance. There is concern about the 38% that were either uncertain, or showed disagreement due to their roles being unclear or undefined, which may not contribute to optimal performance of CPM.

Concerning the statement of relevant and frequent feedback about PM objectives in the organisation, 59% of CPM technicians responded positively. Buller and McEvoy's (2012) studies on Human Resource Management and Performance claimed that when relevant and frequent feedback is given to employees, it directs employees to improve in the areas that they are lacking. With 41% being uncertain or disagreeing, the concern is that not all employees have direction to improve their performance.

Concerning the statement of PM being credible, Figure 4.9 shows that only 36% of CPM technicians were satisfied and 12% were very satisfied. Yen *et al*. (2013) in their study of Perceptions of Environmental Management and Employee Job Attitudes, stated that organisational commitment is achieved when employees accept the company's goals and values as being credible. Lee and Jimenez's (2011) study on Performance Management affecting Job Turnover, stated that much credibility in an organisation is gained when supervisors show support and gauge their subordinates' performance as credible. The concerning figure of 52% being uncertain or disagreeing on PM being credible, may imply a lack of supervisor support.

As much as employees show agreement with the above statements, a shift to greater levels of agreement may create enhanced organisational commitment and greater performance alignment to the company, as supported by Barrick *et al*. (2013) and Yen *et al*. (2013).

5.4.2. Objective 2: CPM technicians' attitudes towards the present appraisal system

With regards to performance appraisal, more participants agreed or strongly agreed to the seven statements as shown in Figure 4.10. Results reveal that 53% respondents positively highlighted that they have a credible appraisal system, online and user friendly. In the study of Globalization of Performance Appraisals, Appelbaum *et al.* (2011) stated that the credibility of performance appraisals is achieved when managers or supervisors are well trained on how to conduct them. These managers must be trained on supervisory roles, managing conflict, setting and defining performance appraisal targets as well as to have constructive discussions with subordinates.

Forty-seven percent of respondents indicated that they are either uncertain or disapprove of the appraisal system being credible, online and user friendly, as shown in Figure 4.10. This may imply that a portion of respondents are not well acquainted with the online appraisal system, neither have they had proper guidance on how to use it, and hence the uncertain and negative response to its credibility. Part one of Longenecker *et al.'s* (2014) studies on trends in formal performance appraisal stated that it is essential for managers to have detailed instructions and guidelines on how to perform and evaluate performance appraisals. This too can imply that those guides and skills be transferred to employees.

Results show that 60% of respondents are uncertain or disapprove of performance appraisals being done timeously. Appelbaum *et al.* (2011) stated that the Piggot-Irvine (2003) model describes appraisals as being well resourced with training and time as key criteria for an effective appraisal. The authors further noted that when managers give employees frequent and continuous feedback, the most important elements of respect, sincerity and trust set the platform for an effective appraisal.

Sixty percent of respondents were either uncertain or showed disapproval with the statement that performance appraisals are used to identify poor performance, whilst only 40% displayed agreement. Figure 4.10 indicates that 52% were either uncertain or displayed negative responses to the statement of performance appraisals being used appropriately to reward an individual for good performance, whilst 48% were in agreement. In his book, Human Resource Management for MBA Students, Henderson (2011) stated that key features of performance management are when continuous monitoring and evaluation are attained, high performance is rewarded and employees with

low performance are coached and counselled. The author further emphasised that it is important to note that management should immediately respond to both high and low performances and not defer it. Performance appraisals may be plagued with common rater errors, hence a good or poor performer cannot be identified correctly. Grobler *et al*. (2011) in his book, Human Resource Management in South Africa, stated that supervisors and managers must not only acknowledge rating problems but also learn how to avoid committing them.

Concerning the statement that performance appraisals motivate individuals to increase their performance in Figure 4.10, 61% of respondents highlighted this positively, whilst only 39% were either uncertain or disagreed. The results noted in Pal's (2014) study on Performance Appraisal Errors, state that employee motivation and productivity are often enhanced when performance appraisal is carried out fairly and accurately. For a higher positive response rate of CPM respondents, it may be implied that the appraisal system needs to be more effective.

Although there were more participants agreeing to the statements of performance appraisal, a shift to more positive responses will require support from management to look at a model for effective appraisals.

5.4.3. Objective 3: The effects of training, development, evaluation and reward

Results show that more than half of the participants agreed to three of the seven statements evaluating training, development, evaluation and reward in the company, as shown in Figure 4.11.

To the statement of – My training needs are clear and are identified early, 54% of CPM participants agreed and 18% strongly agreed. This can be supported by the literature as Rahman *et al*. (2013) in their study of training and organisational effectiveness, stated that skills need to be clear, identified early, and met sufficiently for an effective contribution to an organisation's goals and objectives.

The results show that 56% of CPM respondents agreed and 20% strongly agreed to the statement – With the necessary knowledge, experience and skills I am properly placed. Technicians having the necessary knowledge, experience and skills need to transfer these training attributes to the work environment. According to Brinia and Efstathiou (2012), the

characteristics of a trainee, the content of training and support from management and work colleagues are factors that if applied positively can transfer skills to the work environment, and hence improve performance in an organisation. The implication of the positive responses is congruent with the establishment of a training centre for CPM technicians, support from management and mentoring from work colleagues (Mpunzana, 2015).

It was emphasised that 59% of the participants stated that (extrinsic) monetary reward is the best form of reward to motivate them to increase their performance, as shown in Figure 4.11. It can be implied that the remaining 41% that were uncertain or disagreed with the statement would require intrinsic motivation. Chevalier (2014) stated that both intrinsic and extrinsic rewards need to exist for performance to increase. Armstrong and Taylor (2014) stated that monetary reward is a form of extrinsic motivation and intrinsic of where jobs are challenging or high levels of autonomy may occur. According to Mantshantsha (2015), the recent (August 2015) reward of ex-gratia to Eskom employees, even though bonus targets were not met, can be explained as an extrinsic reward. This may imply that technicians will hold management and hence performance management in high regard with the incentive they received.

In relation to the statement – my training needs are met as per my competency matrix (shown in Figure 4.11), 64% of CPM respondents positively agreed with this statement. However, further analysis with a cross-tabulation of the disciplines shows a varying response. This will be discussed in more detail with relation to the disciplines in Section 5.5.3.

5.4.4.   Objective 4: Factors that affect performance management

CPM respondents were asked to identify factors that affect their performance in the company, as shown in Figure 4.12.

With the statement – Materials, tools and time needed to do the job are present, 30% strongly agreed and 43% agreed. According to Chevalier (2014), in his study on Improving Workplace Performance, the factors of information, resources and incentives that impact performance are sustained by the work environment. It can be implied that having adequate resources, tools and time to complete tasks may contribute positively to performance.

Concerning the statement of competency level of co-workers affecting performance, 41% of CPM respondents agreed and 15% strongly agreed. An accumulative figure of 56% of respondents shows that co-worker competence level does affect their performance. In assessing team work competence, Nadal *et al.* (2015) believe that organisations create larger profits when employees work as a team rather than working alone. The high agreement of 56% in this research study implies that more than half of the respondents see the varying competence levels of their colleagues as a factor of teamwork that is not well supported in CPM. However, in the studies of Recognition of knowledge and skills at work, Berglund and Andersson (2012) states that as much as competence is evaluated and recognised by formal interventions, much informal training is unrecognised due to it being undocumented. It would imply that CPM technicians would want to identify with their work colleagues on both formal and informal levels competence. Hence, on-job training needs to be recognised, as suggested by Berglund and Andersson (2012), so that co-worker support may be seen as contributing positively to performance in the organisation.

In terms of the statement that standby duties, long distance travelling and rate of change of technology affect performance, 21% strongly agreed and 34% agreed with the statement. A cumulative total of 55% of CPM respondents were thus agreeable that these factors affect their performance, as per Figure 4.12. Ziebertz *et al.'s* (2015) studies on the relationship of on-call work with fatigue, work-home interference, and perceived performance difficulties stated that standby duties can be seen as being very stressful. The authors stated that as a result of standby duties, the employee lacks control as he is uncertain when he will be called out or not, or does not have the ability to rest during an inactive standby period. The employee thus has restrictions (e.g. close work-home radius) or may not be satisfied with the remuneration placed on standby duties. These may contribute to high dissatisfaction amongst employees which can hinder performance management from improving. Mpunzana (2015) stated that the high rate of technology poses a challenge in obtaining full competence amongst technicians. He mentioned that technicians performing standby and operational duties expose themselves to more work fatigue stress with the long distances they have to travel. This high percentage of 55% may imply that the high dissatisfaction as a result of these factors may reduce performance in the CPM department.

To the statement of employees being recruited to the realities of the work environment, only 46% of CPM respondents agreed. More than half were uncertain or disagreed with the

statement. Iglesias and Saleem (2015) claimed in their studies concerning the role of corporate culture and human resource policies and practices, that coherently managing policies of staffing and promotion has a significant effect on relationships that support the corporate culture of an organisation. With only 46% agreeing with the recruitment factor, more than half of the respondents are therefore unsure or disagree that recruitment is carried out appropriately.

Concerning the factors that affect performance, co-worker competence (56%), standby duties, long distance travelling, the rate of change of technology (55%) and recruitment of employees (46%) have variations that may need to be cross tabulated with the discipline of work data. This analysis would give a better understanding of which disciplines find these factors most challenging.

It can be concluded that with various factors that affect performance, CPM needs to focus on the improvement of these levels.

5.5. THE EFFECT OF DISCIPLINE OF WORK VARIATIONS ON PERFORMANCE

The discussion of the demographic profiles and the objectives of the study led to more analysis being required. The key approach is to establish the effects of discipline of work on:

- standby duties, long distance travelling and the rate of change of technology
- distribution of task grading,
- distribution of qualifications
- training needs be met easily by competency matrix
- co-worker competence.

A cross-tabulation presented on these factors in Chapter 4 is discussed below.

5.5.1. Relationship of discipline of work with standby duties, long distance travelling, and the rate of change of technology

As shown in Figure 4.13, the effects of standby duties, long distance travelling, and the rate of change of technology had varying responses from the different disciplines. Seventy-five percent of protection technicians, 47% of Metering, 40% of DC Systems and 39% of

Tele-control technicians agreed with the statement. According to the Control Plant Maintenance manager, Nzama (2015) stated that Protection performs both its own discipline standby duties as well as first line standby of DC Systems, and hence the high level of dissatisfaction lies with CPM Protection technicians. According to CPM, training supervisor Mpunzana (2015) mentioned that the various disciplines are exposed to high levels of long distance travelling in the KZN-OU areas, with DC Systems based centrally in New Germany having to cover the entire KZN-OU in response to work. With respect to the rate of change of technology, Mpunzana (2015) pointed out that disciplines heavily loaded with applicable discipline technologies have longer competency duration periods. He concluded that Protection, Tele-control, Metering and DC Systems have lowest to highest competency rates in that order due to the high load of discipline-specific technologies. In comparison to the generic statement in objective 4 regarding standby, long distance traveling, and rate of change of technology, 56% of the total department were aggrieved with statement whilst a higher response of 75% in the Protection discipline is noted.

5.5.2. Relationship of discipline of work distribution with task grading and qualifications

Figure 4.14 displays the mix of task grading between the disciplines and Figure 4.15 displays the qualification spread in the disciplines. Eskom's HR policy requires T12 (senior technicians) to have a minimum of a Bachelor of Technology qualification. The interesting finding in these results is that Tele-control with the highest number of T12 (Senior Technicians) appointed – 69% as per Figure 4.14 – has the lowest number of Bachelor of Technology qualifications as shown in Figure 4.15. This would imply that many T12 in the Tele-control discipline do not meet the requirements of having a Bachelor of Technology qualification. This relates to Figure 4.12 (Objective 4) regarding the statement that employees are being recruited to the realities of the work environment, where only 46% of CPM respondents agreed with the statement. This disproportion of T12 to qualification ratio explains why only 46% agreed with the statement. The implication of such anomalies will be expressed by technicians and their dissatisfaction can contribute negatively to the performance of the CPM department.

5.5.3. Relationship of discipline of work with training needs being met by competency and the relationship with competency of co-workers

Figure 4.16 displays the agreement to the statement – Training needs are easily met by competency matrix with agreement from Protection at 50%, Tele-control at 62%, Metering at 79% and DC Systems at 100%. With only 50% of Protection technicians satisfied, Mpunzana (2015) stated that it takes a protection technician at least 6 to 12 months to become competent at a basic level, three years at intermediate level and six years or more at advanced level. He further stated that the low competency rate may attribute to a large number of technologies that the Protection discipline is exposed to as well as budget constraints as per Eskom's BPP. This was to introduce budget reductions in aid of improving operational efficiencies and to enhance productivity (Eskom Holdings SOC Ltd 2015b). It is further stated in Mpunzana's (2015) paper, entitled Disciplines Specific Technical Staff Competency Durations, that the Metering discipline has been exposed to an accreditation and competency process for some time and hence they would feel much appeased with becoming competent as per their competency matrix. The DC Systems have few courses to gain competency and for technicians to achieve 100% competency in DC Systems is rather quick. Mpunzana (2015) concluded that the Tele-control discipline has it technology standardised and achieves competency sooner; however, he stated that the introduction of automated substations will lead to the amalgamation of the Protection and Tele-control disciplines, which will multi-skill these two disciplines. This would enhance prolonged competency skills so that they are reached sooner.

Figure 4.17 indicates the agreement levels that the CPM disciplines indicated towards co-worker competency. The Protection respondents display an 83% agreement, Metering 32%, Tele-control 46% and DC Systems 40%. With long duration times for competency of protection technicians, as stated by Mpunzana (2015), these results support that a higher level of co-worker exclusion exists due to competency dissimilarities.

In the studies of Mayer, Davis and Schoorman (1995 cited by Erdem & Özen-Aytemur, 2014), it is stated that where trust is associated a co-worker perceives the other as being competent. Erdem and Özen-Aytemur (2014) stated that perceptions of mentoring are closely associated to the competency of their work colleagues where co-worker mentoring expectations link trust of employees to the information and guidance given by a co-worker.

5.6. CORRELATION ANALYSIS BETWEEN THE FOUR OBJECTIVES

Table 4.2 illustrates the Pearson's correlation analysis between the four objectives regarding performance management, appraisals, training, development evaluation, and reward, as well as factors that affect performance management.

The Pearson correlation analysis showed that performance was significantly negatively correlated with appraisal ($p<0.01$), training ($p<0.01$), and factors ($p=0.012$). This means that CPM respondents with a higher score on performance management had low scores on appraisal, training, and factors. It was also found that appraisal was significantly positively correlated with training ($p<0.01$) and factors ($p<0.01$), as shown in Table 4.2.

With reference to Table 4.2, each relation is discussed in turn.

5.6.1. Relationship between performance management, appraisal, training and factors that affect performance

The strong negative correlation between performance management and performance appraisal ($p<0.01$) in Table 4.2 shows that the participants who had a high score on performance had a low score on appraisal. This can be attributed to the time CPM employees participated in this survey in October 2015 when their behaviour could have been influenced by the following announcements in literature, as mentioned by Mantshantsha (2015), Paton (2015) and Eskom Holdings SOC Ltd (2015b):

Performance High can be attributed to:

- Appointment of Senior Executives at Eskom in September 2015 – that Brian Molefe was appointed as group CEO of Eskom, Anoj Singh as chief financial officer (CFO) and Ben Ngubane as chairman of the company.

- Ex-gratia bonus awarded to all employees excluding senior executive managers – August 2015.

- Considerable reduction of load shedding.

Appraisal Low can be attributed to:

- Budget cuts as a result of Eskom's Business Productivity Programme (BPP), where financial budgets were significantly reduced.

- Performance targets not met, Eskom announced that no performance bonus would be paid out.

- Research showed that ratings were not optimal with performance appraisal. It could be implied that appraisals were not done timeously, that there was a high level of rater errors, and that no monetary incentives were available for appraisals due to BPP.

Training Low can be attributed to:

- Research has shown that disciplines have a varying competency duration as a result of varying competency requirements as stated by Mpunzana (2015).

- Reduced or no financial budgets were available for training or reward as per Eskom's Business Productivity Programme.

- Research indicated that co-worker competency affected performance with 83% (Figure 4.17) from Protection, who make up the largest number of respondents of this research (at 39% as per Figure 4.6), agreeing with the statement.

- Varying competency duration of disciplines, as mentioned stated by Mpunzana (2015) and Figure 4.16.

Performance factors being Low as indicated by research:

- Standby duties, long distance travelling and rate of change of technology affected all CPM technicians with Protection being most aggrieved with a 75% response rate, as depicted in Figure 4.13.

- Only 45% of CPM respondents believed that recruitment was done correctly, while the remaining 55% were either uncertain or disagreed, as illustrated in Figure 4.12.

- Fifty-four percent of all respondents agreed that competency level of co-workers affected their performance, as per Figure 4.12.

- Only 53% of CPM respondents believed that a reward system is still functional, as shown in Figure 4.12.

- Only 61% agreed that the work environment is great to work in, as per Figure 4.12.

- Analysis has shown that recruitment is not done appropriately as high levels of T12 are appointed in Tele-control with low levels of Bachelor of Technology levels.

The research has indicated considerably low responses to performance appraisal, training, development, evaluation and reward, whilst many announcements made by Eskom (Ex-Gratia, no load shedding, and executive appointment) did influence CPM technicians to regard performance management as being promising.

5.6.2. Relationship between performance appraisal and training, development, evaluation and reward

It was also found that appraisal was significantly positively correlated with training ($p<0.01$) and factors ($p<0.01$), as shown in Table 4.2.

This can be related to the strong link that the CPM department has associated with training, evaluation appraisal and reward. Mpunzana (2015) stated that the establishment of a Training Centre for CPM technicians had seen technicians being trained and evaluated to an accreditation process of competency which placed technicians into categories of basic, intermediate or advanced. Training and accreditation were high targets on technicians' performance compacts. This highlighted the need for the CPM department to have competent technicians for highly skilled work outputs. The promise rewards for achieving targets were high monetary award, hence the strong positive correlation between performance appraisal with training, development, evaluation and reward (Mpunzana, 2015).

5.7. KEY FINDINGS

The research questions in this study were posed to gauge how performance management is approached at Eskom's CPM department in the KZN-OU. In order to determine whether this research study has adequately answered each objective, key objective findings and discipline performance findings are summarised in Table 5.1 below.

Table 5.1: Summary of key findings

	Objectives	Finding	Section
1	To examine the attitude and perception of technicians of the CPM Department within Eskom's Distribution KZN-OU towards performance management in general.	It was found that 62% of CPM technicians accumulatively agreed that job roles and performance expectations are clearly defined. Concerning the statement of relevant and frequent feedback about PM objectives in the organisation, 59 % of CPM technicians responded positively. Regarding the statement of PM being credible, only 48% of technicians showed satisfaction	5.4.1
2	To determine the technicians' attitudes towards the present appraisal system	Results reveal that 53% of respondents positively highlight that they have a credible appraisal system, online and user friendly. Results show that 60% of respondents are uncertain or disapprove of performance appraisals being done timeously. Only 40% of respondents agreed with the statement that performance appraisals are used to identify poor performance. Only 48% were in agreement with the statement that performance appraisals are used appropriately to reward an individual for good performance. Concerning the statement that performance appraisals motivate individuals to increase their performance, 61% of respondents highlighted this positively.	5.4.2
3	To examine the effects of technician training, development, evaluation and reward on performance	To the statement of 'My training needs are clear and are identified early', 72% of CPM participants responded positively. The results show that 76% of CPM participants responded favourably to the statement – 'With the necessary knowledge, experience and skills I am properly placed'. It is clear that 59% of the participants stated that (extrinsic) monetary reward is the best form of reward to motivate them to increase their performance.	5.4.3

4	To identify factors that influence performance management and to recommend improvements for the present performance management system to ensure it is designed for the purpose of achieving the company's goals, vision and values.	With the statement – 'Materials, tools and time needed to do the job are present', 73% were in approval. Concerning the statement of 'Competency level of co-workers affecting my performance', 56% of CPM respondents were in favour. In terms of the statement that standby duties, long distance travelling and rate of change of technology affect performance, 55% were in support of the statement. To the statement of employees being recruited to the realities of the work environment, only 46% of CPM respondents agreed.	5.4.4
	Discipline performance findings		
	The effects of standby duties, long distance travelling, and the rate of change of technology have a varying response from the different disciplines. Seventy five percent of Protection technicians, 47% of Metering, 40% of DC Systems and 39% of Tele-control technicians agreed with the statement. Not all disciplines were de-concentrated into the areas. The Protection discipline took on additional 1st line standby of the DC Systems discipline.		5.5.1
	Concerning the agreement to the statement - Training needs are easily met by competency matrix, 50% of Protection agreed, and 62% of Tele-control, 79% of Metering and 100% of DC Systems agreed.		5.5.3
	With regard to the agreement levels that the CPM disciplines have towards co-worker competency affecting their performance, the Protection respondents displayed an 83% agreement, Metering 32%, Tele-control 46% and DC Systems 40%.		

As shown in Table 5.1, the research objectives have been answered and have revealed key findings. Further Discipline analysis has exposed additional findings that influence performance management in CPM. In order to tie up objectives to key findings, the limitations of the study must first be understood.

5.8.   LINKING OBJECTIVES TO FINDINGS

It is necessary for the researcher to link objectives to the findings of the study. This gives a clear understanding of what has been achieved in the research. The evaluation of

performance management in the CPM department can either be refuted by or concurred with previous work and research as discussed below.

5.8.1.   Evaluation of performance management of CPM in general

In examining the attitudes and perceptions of CPM technicians towards performance management, three key findings identify the position of where performance rests in the department.

With 62% of CPM technicians agreeing that job roles and performance expectations are clearly defined and 59% agreeing to feedback being frequent, literature draws interpretations and inferences that employees will feel motivated and their behaviour aligns to that of performance. It is of concern that these statistics are not optimal. It can be concluded from research that more support is required from managers and supervisors to explain these responsibilities towards work, giving clear direction for optimal performance.

Having only 48% of CPM respondents agreeing to performance management being credible is concerning, as it implies that 52% may not be obliging to organisational commitment. Research has suggested that managers and supervisors should provide continuous guidance, set clear expectations and measure short-term deadlines as frequent activities. This should establish a healthy employee-manager relationship that assigns credibility to the organisation and aligns employee goals to that of the company.

5.8.2.   Evaluation of the performance appraisal system

Results reveal that 53% of respondents positively highlighted that they have a credible appraisal system, online and user friendly. Not having an optimal positive response is of concern. Findings of studies state that it is essential that managers have detailed instructions and guidelines on how to perform and evaluate performance appraisals. Research supports that a supervisor's role is to evaluate their subordinates and if the assessment is credible, employees' perception of the entire organisation being credible is often based on this. It can be concluded that the performance appraisal system at CPM may not be optimally used due a lack of training or proper guidance on how to use the system. The lack of supervisor training and support may also be prevalent as studies indicate that effective performance appraisals are attributed to managers who are well trained on how to conduct them. It is quite evident from findings that the performance appraisal system is not optimally effective. Studies have shown that much credibility of appraisal systems is

achieved when appraisals are carried out fairly and free of errors. Common rater errors, such as rater bias, halo effect, central tendency, leniency, strictness, recency/primary effect may effect credibility of the performance appraisal system. Research suggests an effective model, the Piggott-Irvine model, which may be used with key requirements for effective appraisals stated as trust, mutual respect, clear guidelines, independent from disciplinary aspects, and well-resourced with training and time. It can be concluded that CPM can implement such a model to ensure that rater errors are reduced or removed so that the performance appraisal system is seen to be more credible.

Results show that 60% of respondents are uncertain or disapprove of performance appraisals being done timeously. Research shows that by giving employees frequent and continuous feedback, the most important elements of respect, sincerity and trust set the platform for an effective appraisal. This high rate of 60% uncertainty or disapproval leads to the research concluding that a key element of frequent and continuous feedback is lacking.

Only 40% of respondents agreed with the statement that performance appraisals are used to identify poor performance and only 48% were in agreement with the statement that performance appraisals are used appropriately to reward an individual for good performance. These low response rates are a concern that evaluation of poor or high performance is not identified and nor is it corrected or rewarded appropriately. Research has shown that there should be continuous monitoring and evaluation where high performance is rewarded and employees with low performance are coached and counselled. It is important to note that management should deal with both high and low performances immediately and not defer it. It can be concluded that by not identifying good or bad performance, the corrective action or reward will not take place appropriately in CPM. Findings of research state that regular formal reviews of monitoring and evaluation of performance and management responses to the performance must take place, and if need be, a new performance contract should be introduced.

Concerning the statement that performance appraisals motivate individuals to increase their performance, 61% of respondents highlighted this positively. The 39% of responses that were uncertain or in disagreement are reason for concern. Research has shown that in managing performance that is off target, a platform for motivation and encouragement must be created together with a development plan to increase performance so that the

company's performance as a whole can improve. Findings from research also indicate that an employee-employer performance agreement that defines both objectives and employee development needs motivates employees to achieve objects that are reliable and achievable. Research also indicates various appraisal methods that can be tested for use in organisations, with the Management by Objectives and 360-review being most prominent. Further studies have indicated that for team performance the balanced scorecard tool may be used at business unit level, where employees would align to the business and corporate balanced scorecard level with their individual scorecard. It can be concluded that more effective methods of appraising CPM employees can enhance motivation towards performance in an organisation.

5.8.3. Evaluation of the effects of technician training, development, evaluation and reward on performance

The majority (72%) of CPM participants responded positively to the statement of 'my training needs are clear and are identified early'.

Research indicates that a needs analysis is essential for identifying deficiencies so that an environment is created with the aim of positively influencing knowledge, skills and attitudes. Further findings indicate that supervisors and managers must be involved in developing a training plan where levels of performance can be measured against set standards. Other studies also indicate that skills need to be clear, identified early, and met sufficiently for an effective contribution to an organisation's goals and objectives. With the high 72% positive response, it can be concluded that much has been done to define training needs which are clear and identified early in CPM. The 28% that were uncertain or not agreeing with the statement led to the conclusion that the process is not optimally done.

The results show that 76% of CPM participants responded favourably to the statement – 'With the necessary knowledge, experience and skills I am properly placed'.

Research has shown that for successful skills transfer an organisation should focus on implementing a training programme that is effective to achieve this. The high rate of positive agreements in CPM can be attributed to the fact that a training centre was especially built for CPM technicians, where their formal accreditation has been carried out. The finding that CPM technicians have formal accreditation processes for their performance objectives is indicative of the high positive response rate. The shortfall of

24% implies that not all CPM technicians are fully utilising processes and facilities available to them.

Fifty-nine percent of the participants stated that (extrinsic) monetary reward is the best form of reward to motivate them to increase their performance.

Studies have shown that both intrinsic and extrinsic rewards need to exist for performance to increase. Further research indicated that monetary reward is a form of extrinsic motivation and intrinsic is when jobs are challenging or high levels of autonomy may occur. The findings of 59% being favourable toward monetary reward can be attributed to extrinsic motivation. The evidence from research indicates that the recent (August 2015) reward of ex-gratia to Eskom employees, even though bonus targets had not been met, can be regarded as an extrinsic reward. This may lead to technicians holding management and hence performance management in high regard due the incentive they received. The fact that 41% were uncertain or disagreed with the statement, could imply that intrinsic motivation is a form of reward they would expect. Research has indicated that both forms of reward, extrinsic and intrinsic, need to exist for performance to increase. CPM should thus ensure that optimal motivation is achieved for enhanced performance.

5.8.4. Evaluation of factors that affect performance and discipline performance findings

With the statement, 'materials, tools and time needed to do the job are present', 73% of CPM respondents were in approval.

Studies have shown that in improving workplace performance, the factors of information, resources and incentives that impact performance are sustained by the work environment. This could imply that if the majority of CPM technicians have adequate resources, tools and time to complete tasks, they may contribute positively to performance. The 27% that either responded negatively or with uncertainty could imply that material, tools and time are not always available for CPM technicians to accomplish their tasks.

Concerning the statement of 'competency level of co-workers affecting my performance', 56% of CPM respondents agreed that co-worker competency level affects their performance. Studies have shown that in assessing team work competence, organisations create larger profits when employees work as a team rather than working alone. This high

agreement of 56% implies that more than half of the respondents see the varying competence levels of their colleagues as a factor of teamwork that is not well supported in CPM.

When considering the same responses with various disciplines' results, the Protection respondents display an 83% agreement, Metering display 32%, Tele-control 46% and DC Systems 40%. With findings from research, long duration times of competency of Protection technicians support that a higher level of co-worker exclusion exists due to competency dissimilarities.

This evidence can imply that Protection technicians are most aggrieved by co-worker competence not being high. The dependency for co-worker competence can be seen as a requirement for highly skilled tasks.

Research has shown that where trust is associated, a co-worker perceives the other as being competent. Other studies have shown that perceptions of mentoring are closely associated to the competency of their work colleagues where co-worker mentoring expectations link trust of employees to the information and guidance given by a co-worker. It can be concluded that CPM technicians require co-worker competence for them to work efficiently as a team. There is a high requirement of co-worker competence especially in the Protection discipline.

In relation to the statement of training needs are met by competency matrix, this has relevance here to the factors that affect performance. The technicians agreed at the levels shown – Protection 50%, Tele-control 62%, Metering 79% and DC Systems 100% agreed – contrary to the overall agreement of CPM respondents of 64%. The disparities in evidence with research have shown that the Protection discipline has longer competency periods due a high volume of technology knowledge requirement as well budget financial constraints. Other departments have less technology exposure, with the metering being familiar to the accreditation process for a considerable amount of time. With the DC Systems having the fewest technologies their competency rate is the highest, which concurs with the research findings of 100%. The Tele-control discipline indicated that their technologies are duplicated and fewer, so competence is reached sooner. The introduction of automated substations will lead to the amalgamation of the Protection and Tele-control

disciplines, which will multi-skill these two disciplines. This will enhance prolonged competency skills such that they are reached sooner.

In terms of the statement that standby duties, long distance travelling and rate of change of technology affect performance, 55% supported the fact that it affects their performance. Studies have shown that standby duties can be very stressful; as result of on-call duties an employee lacks control as he is uncertain when he will be called out or not; or he does not have the ability to rest during an inactive standby period; the employee has restrictions (e.g. close work-home radius) or may not be satisfied with the remuneration placed on standby duties. These factors may contribute to high dissatisfaction amongst employees that can hinder performance management from improving. The agreement index regarding standby duties, long distance travelling and the rate of change of technology shows noticeably different responses from the individual disciplines. Seventy five percent of protection technicians, 47% of Metering, 40% of DC Systems and 39% of Tele-control technicians agreed with the statement. As per research findings, it is apparent that the Protection discipline performs both its own discipline standby duties as well as first line standby of DC Systems, and hence the high level of dissatisfaction lies with CPM Protection technicians. Further research findings have mentioned that the various disciplines are exposed to high levels of long distance travelling in the KZN-OU areas, with DC Systems based centrally in New Germany having to cover the entire KZN-OU in response to work. With respect to the rate of change of technology, research has pointed out that disciplines heavily loaded with applicable discipline technologies have longer competency duration periods. The findings conclude that Protection, Tele-control, Metering and DC Systems have lowest to highest competency rates in that order due to the high load of discipline-specific technologies. In comparison to the generic statement in objective 4 regarding standby, long distance traveling, and rate of change of technology, 56% of the total department were aggrieved with statement whilst a higher response of 75% in the Protection discipline is noted.

To the statement of employees being recruited to the realities of the work environment, only 46% of CPM respondents agreed. Research studies show that coherently managing policies of staffing and promotion has a significant effect on relationships that support the corporate culture of an organisation. With only 46% agreeing with the recruitment factor,

more than half of the respondents were unsure or disagreed that recruitment is carried out appropriately.

Regarding the effect of employee recruitment, research has shown that Eskom's HR policy requires T12 (senior technicians) to have a minimum of a Bachelor of Technology qualification. The interesting finding in these results is that Tele-control with highest number of appointed T12 (Senior Technicians) – 69%, has the lowest number of Bachelor of Technology qualifications. This would imply that many T12 in the Tele-control discipline do not meet the requirements of Bachelor of Technology qualification. This disproportion of T12 to qualification ratio explains why only 46% agreed to the statement. The implication of such anomalies will be expressed by technicians and their dissatisfaction can contribute negatively to the performance of the CPM department.

5.8.5. Summarised performance evaluation linkage

It is necessary to summarise the evaluation of the CPM performance management system in order to acknowledge gaps in the present management system and make recommendations to improve CPM departmental performance.

Credibility of the performance management system can be improved with continuous supervisor support which is defined as a day-to-day activity that is presently concluded to be lacking. The appraisal system has been identified as lacking supervisor support and guidance, lack of supervisor appraisal training on how to use the system and transfer knowledge to employees. The appraisal system may be more effectively used by eliminating rater errors, and applying a more appropriate appraisal method. It has been also concluded that the performance appraisal system may not identify good or poor performers such that corrective action or reward is immediate. Statistics have concluded that Eskom has good training practices and processes but they are not optimally used or implemented. Findings also indicate that reward must not be limited to monetary reward, but both intrinsic and extrinsic rewards must be available to motivate employees. The findings also indicate that CPM has a high level of qualified resources available to carry out tasks. The factor of co-worker competency is required in CPM for improved teamwork, where mentoring may assist to close this gap of co-worker exclusion and link trust to the co-workers. Standby duties, long distance travelling and the rate of change of technology contribute to the level. Standby duties can be concluded as being very stressful and affect satisfaction levels of technicians. Protection is a discipline that is most aggrieved by

standby duties, long distance travelling and the rate of change of technology, co-worker competency, competency duration levels as well as additional standby of DC Systems technicians. DC Systems should have a decentralised approach to negate the effects of long distance travelling and lower levels of standby amongst protection technicians. It can be concluded that the existing CPM department does not operate as an aligned team, with varying responses from the different disciplines on performance elements that were not at optimal levels.

5.9. LIMITATIONS OF THE STUDY

The limitations identified in this study provide guidance for future research, hence it is necessary for the researcher to document these limitations. The limitations acknowledged include the following:

- The most significant limitation was the lack of academic literature on standby duties, long distance travelling and rate of change of technology that affect performance in an engineering company. This made it difficult to draw comparisons, arguments or similar approaches with findings from other studies.

- The geographic location of the study was limited to the KwaZulu-Natal operating Unit of Eskom in the Distribution sector. The implications are that these results may not hold true for other regions.

- The survey was limited to a small population. Had a larger population been available, more defined results could make generalisation to a larger population of CPM technicians possible.

5.10. RECOMMENDATIONS

The findings of this research have demonstrated that the aims and objectives of evaluating the existing performance management system, its appraisal system and the various factors that contribute to the performance of CPM in the KZN-OU as a whole have been achieved.

5.10.1. Implications of the research

The contribution of this study, despite the limitations, which include lack of academic research, serve as entry for further research into the field of Technician Performance in Engineering Organisations. The Control Plant Maintenance Department in KwaZulu-Natal, its CPM technicians and management will benefit from this research to improve present

practices and processes with regard to enhancing performance management. The efforts of these improvements would contribute to the performance of Eskom as a whole.

5.10.2. Recommendations to improve performance management at Eskom's KZN-OU Control Plant Maintenance Department

The recommendations in this study are aimed at improving performance management of Eskom's Control Plant Maintenance Department in the KZN-OU. Recommendations are made to improve the existing appraisal system and performance management in general, and to recommend a departmental structure change where a balanced scorecard tool will measure and align performance at individual, business and corporate level.

5.10.2.1. General performance management

In attempting to improve credibility of performance management in the CPM department, all issues of integrating technicians into the work environment must be addressed with a sense of urgency and commitment. These include issues of defining job roles and expectations, department relocation and supervisor support.

1. De-concentrate DC Systems discipline into the areas of Margate, New Germany, Pietermaritzburg, and Empangeni.

2. Allocate standby duties to DC System technicians so as to unburden the Protection technicians on first line standby duties.

3. Multi-skill CPM technicians to perform cross discipline tasks.

4. Encourage continuous supervisor support on all platforms specifically focusing on the following:

    a. Performance evaluations;
    b. Motivation by rewarding both extrinsically and intrinsically
    c. Defining job roles and expectations so as to link to company vision, strategy and objectives;
    d. Encouraging teamwork to reduce the effects of co-worker exclusion; and
    e. Improving competency levels at a faster rate.

5.10.2.2.Performance appraisal system

In improving the performance appraisal system a clear understanding is required of how the appraisal system and processes work in order to improve credibility of appraisals and enhance performance of the Control Plant Maintenance Department. The improvements consist of the following:

1. Detail instructions and guidelines on how to perform and evaluate performance appraisals.

2. Training to be provided for both appraiser and appraisee to use the online appraisal system.

3. Educate supervisors in avoiding rater errors.

4. Use Piggot-Irvine Model for effective appraisals.

5. Encourage supervisors to give employees continuous and frequent feedback.

6. Regular formal reviews, evaluations and management responses must be conducted to identify both high and low performance.

7. Promote reward for high and low performance and coaching or counselling.

8. Low and high performance must have immediate responses.

5.10.2.3.Department structure change and balanced scorecard support

With the high rate of changing technology, the amalgamation of two disciplines (Protection and Tele-control) is imminent due to substation automation technology. Metering should also be included in future with the technology of all three disciplines amalgamated in one device. Presently the DC Systems discipline is centrally-based, first line standby is done by the Protection discipline and travelling distances to de-concentrated areas are extremely far. The approach recommended is as follows:

1. Multi-skill all four disciplines to know each other's tasks.

2. All disciplines to be de-concentrated into the work operating areas of KZN-OU operating unit.

3. Introduce a balanced scorecard tool that aligns employees' individual scorecards to the business and corporate level.

5.10.2.4. Benefits of structure change and balance scorecard support

The amalgamation of the four disciplines and introduction of the balanced scorecard will provide the following benefits:

1. Improved recruitment anomalies (all disciplines will make appointments with a common need goal of T11 and T12).

2. Strengthened work force – more resources available.

3. Reduced standby stress which will be achieved by

   a. having additional resources of multi-discipline employees of the new CPM department

   b. a decrease in the number of standby shifts (standby duties can decrease)

4. Employees will have their own individual scorecard which will align with the business level and corporate scorecard.

5. Balanced scorecard will link performance measures of customer, financial, internal business processes, learning and growth due to the new structure.

5.10.3. Recommendations for future research

The outcomes of this study, collectively with the limitations identified, provide direction for future research. The recommendations for future research include the following:

- Future research into the field of performance management should include the impact of standby duties, long distance travelling and rate of change of technology on performance management. Since many factors affect performance, it is imperative that studies include such influences.

- Further studies should include the entire geographical location of Eskom where Control Plant Maintenance technicians are dispersed. The findings can be generalised to a larger population, where probability sampling may be employed.

- Further studies could include the impact of female technicians performing field duties in engineering companies. With the high influx of females into the engineering business, many field-related problems arise. The impact of this on performance is of interest to engineering companies.

- Future studies could include the effect of load shedding on CPM technicians' performance in the KwaZulu-Natal Operating unit. CPM technicians are responsible for ensuring that load shedding technologies are installed in substations. This adds to an increased amount of emergency work and stress with management and the public. Performance under such conditions should be measured.

5.10.4. Conclusion

The research objectives for this study have been achieved even after considering the limitations of the study. The research has evaluated the approach that Eskom's Control Plant Maintenance Department in the KZN-OU has taken towards performance management. Several gaps in the present management system have been identified and valid, practical and implementable recommendations have been provided on improving performance management in CPM. The concept of the balanced scorecard has also been recommended together with a structure change that combines the four work disciplines into one. Benefits of the structure change highlighted gaps identified during this study; these gaps should be closed. With Eskom facing many financial challenges and the impact load shedding has had on its credibility, the sustainability of the organisation is very much dependent on performance approaches taken by business unit levels. There is significant literature on performance management; however, a dearth of research exists on engineering companies and performance. This study is the first one to specifically address performance management factors of CPM technicians, and provides a suitable starting point from which future studies may be undertaken. The study has highlighted an approach to address the gaps in performance that do not align with the goals, objectives and aspirations of the company.

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APPENDIX 1:

INFORMED CONSENT LETTER

AND QUESTIONNAIRE

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

Dear Respondent

MBA Research Project
Researcher: Mr Poobalan Gounder (0726073332)
Supervisor: Dr Abdul Kader (0829010225)
Research Office: Mariette Snyman

Research Office: HSSREC – Humanities & Social Sciences Ethics

Email: snymanm@ukzn.ac.za / hssreclms@ukzn.ac.za

Fax: 031 260 3093

I, **Mr Poobalan Gounder** am a MBA student, at the Graduate School of Business and Leadership, of the University of KwaZulu-Natal. You are invited to participate in a research project entitled **An Evaluation of Eskom's Control Plant Maintenance Department's approach to performance management in KwaZulu-Natal.**

The aim of the study is to establish the level of performance that rests with CPM technicians. An evaluation is required of the existing performance management system such that recommendations can be made to improve the existing practices and approach.

Through your participation I hope to understand the level of performance at Eskom's Control Plant Maintenance Department based in the KwaZulu-Natal Operating Unit.

The results of the survey are intended to identify factors that affect performance management, recommend improvements to management to improve the existing performance management systems.

Your participation in this research is voluntary and participants may withdraw from participating at any point, and that in the event of refusal/withdrawal of participation the participants will not incur penalty or loss of treatment or other benefit to which they are

normally entitled. There are no costs that might be incurred by participants as a result of participation in the study. Incentives of a media player will be given to a participant who completes within the week that the survey was sent off. Your responses from the survey are strictly confidential and are coded to remain confidential. Data from this survey will only be reported in the aggregate and is therefore important for us to learn from your opinions.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The survey should take you about 10 minutes to complete. I hope you will take the time to complete this survey.

Sincerely

Researcher's signature_____

Date_____

This page is to be retained by participant

MBA Research Project
Researcher: Mr Poobalan Gounder (0726073332)
Supervisor: Dr Abdul Kader (0829010225)
Research Office: Mariette Snyman

Research Office: HSSREC – Humanities & Social Sciences Ethics

Email: snymanm@ukzn.ac.za / hssreclms@ukzn.ac.za

Fax: 031 260 3093

<u>CONSENT</u>

I, Poobalan Gounder, hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT   DATE

…………………………………   …………………………………………

This page is to be retained by researcher

Section A: Demographics

Please click on the appropriate tab

1. Gender.

○   Male

○   Female

2. Age

○   18 - 25

○   25 - 35

○   35 - 45

○   45 - 55

○   55 - 65

○   65 or older

3. Please indicate your ethnic group

○   African

○   Indian

○   Coloured

○   White

4. Please indicate your Task Grading

○ T11

○ T12

5. Please indicate work experience at Eskom

○ Less than a year

○ 1-3 years

○ 3-5 years

○ 5-10 years

○ 10-20 years

○ More than 20 years

6. Please select a discipline that you work in.

○ Protection

○ Tele-control

○ Metering

○ DC Systems

7. Please select an area that you work in.

○ Margate

○ Empangeni

○ Newcastle

○ New Germany

○ Pietermaritzburg

8. Please indicate your qualification

○ National Diploma

○ Bachelor of Technology

○ Other ……………………..

Section B: Objective Questions

Performance management is not just an appraisal tool but focuses on framework of setting goals, implementing standards and meeting competency requirements.

Objective 1: How satisfied are you with the following statements towards performance management?

	Statement	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied
9	Job roles and performance expectations are clearly defined about the adequacy of performance	❏	❏	❏	❏	❏
10.	Relevant and frequent feedback is given about of performance management objectives in the organisation	❏	❏	❏	❏	❏
11	Performance management system guides employee performance and development	❏	❏	❏	❏	❏
12	Managers and employees agree on what constitutes good or bad performance	❏	❏	❏	❏	❏
13	Performance management is seen to be very credible in our organisation	❏	❏	❏	❏	❏

Objective 2: Performance Appraisals

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
14	Performance Appraisals motivate individuals to improve their performance	❏	❏	❏	❏	❏
15	Performance appraisals are used appropriately to reward an individual for good performance	❏	❏	❏	❏	❏
16	Performance appraisals are used to identify poor performance	❏	❏	❏	❏	❏
17	Performance Appraisals are carried out in good time (timeously)	❏	❏	❏	❏	❏
18	We have a credible appraisal system, online and user friendly	❏	❏	❏	❏	❏

Objective 3: Training Development, Evaluation and Reward

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
19	My training needs are clear and are identified early	❏	❏	❏	❏	❏
20	My training needs are easily met as per competency matrix, such that i have the necessary knowledge, experience and skills	❏	❏	❏	❏	❏
21	With the necessary knowledge, experience and skills I am properly placed to use and share what I know	❏	❏	❏	❏	❏
22	Employees have an opportunity to succeed and career development opportunities are present	❏	❏	❏	❏	❏
23	I am frequently evaluated to identify my performance capabilities	❏	❏	❏	❏	❏
24	Monetary Reward is the best form of reward to motivate me to increase my performance	❏	❏	❏	❏	❏
25	I am cross-trained to understand each other's roles	❏	❏	❏	❏	❏

Objective 4: Factors that affect performance management

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
26	Overall physical and psychological work environment contributes to improved performance; work conditions are safe, clean, organized, and conducive to performance	❏	❏	❏	❏	❏
27	Financial and non-financial incentives are present - measurement and reward systems support positive performance	❏	❏	❏	❏	❏
28	Employees are recruited and selected to match the realities of the work situation	❏	❏	❏	❏	❏
29	Standby duties, long distance travelling, rate of change of technology are factors that affect my performance	❏	❏	❏	❏	❏
30	Competency level of co-workers affect my performance	❏	❏	❏	❏	❏
31	Materials, tools, and time needed to do the job are present	❏	❏	❏	❏	❏

APPENDIX 2:
ETHICAL CLEARANCE

UNIVERSITY OF KWAZULU-NATAL ™

INYUVESI YAKWAZULU-NATALI

19 October 2015

Mr Pooalan Gounder (931309623)
Graduate School of Business & Leadership
Westville Campus

Dear Mr Gounder,

Protocol reference number: HSS/1339/015M
Project title: An evaluation of Eskom's Control Plant Maintenance Department's approach to performance management in KwaZulu-Natal

Full Approval – Expedited Application

In response to your application received on 21 September 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL**.
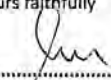
Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further 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

....
Dr Shenuka Singh (Chair)

/ms

Supervisor: Dr Abdul Kader
Cc Academic Leader Research: Dr Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
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APPENDIX 3:
GATEKEEPER'S LETTER

Eskom

Date:
28.08.2015

Enquiries: Lwazi Nzama
Tel +27 710 5328

To Whom It May Concern

I, **Lwazi Nzama**, the undersigned, hereby give permission for **Poobalan Gounder** to conduct research at Eskom's Control Plant Maintenance Department in the KwaZulu-Natal Region. This is to aid in him in his dissertation entitled – "**An Evaluation of Eskom's Control Plant Maintenance Department's approach to performance management in KwaZulu-Natal**".

I am aware that dissertations and subsequent academic papers based on this data will be available in the public domain.

Yours faithfully

Lwazi Nzama   28 August 2015
Control Plant Maintenance Manager
Eskom Distribution
KwaZulu-Natal Operating Region