

**EFFECTS OF TRAINING AND DEVELOPMENT ON EMPLOYEE PERFORMANCE:
A CASE OF GOVERNMENT CHEMIST LABORATORY, KENYA.**

BY

JOYCE WANJIKU NYOIKE

C51/84359/2012

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF PUBLIC
ADMINISTRATION, DEPARTMENT OF POLITICAL SCIENCE AND PUBLIC
ADMINISTRATION, UNIVERSITY OF NAIROBI

NOVEMBER 2020

DECLARATION

This research project report is my original work and has not been presented for a degree in any other university.

Signed

Date 11/11/20.....

Joyce Wanjiku Nyoike

C51/84 359//2012

This research project report has been submitted for examination with my approval as the University Supervisor.

Signed.....

Date

Dr. Justine Magutu

Department of political science and public administration

University of Nairobi

ABSTRACT

The purpose of this study was to analyze the relationship between training and development and its effect on employee performance at the Government Chemist Laboratory in Kenya. The Government Chemist Laboratory is the central chemical testing laboratory for the Republic of Kenya. The laboratory is mandated by the government to provide evidence derived from the analysis of evidential materials collected from scenes of crime or from suspected scenes of crime and also carry out tests on foods, water and waste water, drugs of abuse and various chemical substances. The main objective of the study was to determine the effects of training and development on employee performance at the Government Chemist Laboratory. The study was guided by the following specific objectives; to establish how training needs analysis affects employee performance at the Government Chemist Laboratory; to find out how organizational training culture influences employee performance at the Government Chemist Laboratory, and to determine how the training and development methods used at the Government Chemist Laboratory influence employee performance. The study was anchored on two theories namely; Reinforcement theory and the Human capital theory. The study hypothesized that there is a significant relationship between: training and development and employee performance; training needs analysis and employee performance; organizational training and development culture and employee performance; methods of training and development and employee performance at the Government Chemist Laboratory. The study used a descriptive cross-sectional research design. The target population was 70 employees working at the Government Chemist Laboratory, Nairobi and clients using the Laboratory services. A sample of 59 employees and 11 clients was randomly selected. The study collected primary data using structured questionnaires which was analyzed using mean, standard deviation, percentages and frequencies. The data collected was analysed using Statistical Package for Social Scientists (SSPS) tool. Analyzed data was presented in the form of tables and figures. The study findings revealed that although training needs analysis was carried out at the Government Chemist Laboratory, there was no consensus as to when and how often it was carried out. The findings further indicated that both off-the-job training and on-the-job training methods are employed at the Government Chemist Laboratory. The study also established that there are several factors which, to varying extents, hindered employee training and development. Overall the study established that there is a positive relationship between training and development of employees and employees' performance at the Government Chemist Laboratory.

ACKNOWLEDGEMENTS

My thanks go to the almighty God for strengthening me and enabling me to carry out this research project. My gratitude also goes to my supervisor Dr Justine Magutu for patiently walking with me during the tiring journey without giving up. My thanks also go to the leadership of the Department of Political Science and Public Administration who have facilitated my study all through without fail. Finally, I would like to thank my employer the Government of Kenya for providing to a great extent the resources that I required to undertake the study.

DEDICATION

I dedicate this research project to my husband Patrick Peter Kiarie, our daughters Sarah and Lilian and our son Samuel. I recognize their endless support and encouragement during the lengthy period of my study. This project is also dedicated to my parents Mr. and Mrs. Nyoike, who took me to school when I didn't know the importance and power of education.

TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
DEDICATION	v
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS AND ACRONYMS.....	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the study	1
1.2. Statement of the Problem.....	5
1.3 Research questions.....	6
1.4 Research objectives.....	6
1.5 Justification of the Study.....	7
1.6 Scope and Limitations.....	8
1.7 Definition and Operationalization of Key Concepts.....	8
LITERATURE REVIEW	10
2.0 Introduction.....	10
2.1 Meaning of Training and development.....	10
2.2 Training needs analysis and employee performance	11
2.3 Organizational Training Culture and Employee Performance.....	13
2.4 Training and development Methods and Employee Performance	15

2.5 Training and development and employee performance	17
2.6 Theoretical framework	18
2.6.1 Reinforcement theory	18
2.6.2 Human capital theory	19
2.7 Conceptual Framework	20
2.8 Hypotheses	21
CHAPTER THREE.....	22
RESEARCH METHODOLOGY	22
3.0 Introduction.....	22
3.1 Research design.....	22
3.2 Population of the Study	22
3.3 Sampling Technique and Sample Size.....	23
3.4 Data Collection	23
3.5 Data Analysis	24
3.5.1 Validity and Reliability test	24
3.6 Ethical Considerations	25
CHAPTER FOUR.....	26
DATA PRESENTATIONS, ANALYSIS AND DISCUSSIONS	26
4.0 Introduction	26
4.1 Response Rate	26
4.2 Demographic Information.....	26
4.2.1 Years of Experience	26
4.2.2 Level of Education	27

4.2.3	Ages of Respondents.....	28
4.3	Training and development needs analysis and employee performance	28
4.3.1	Frequency of Determining Training and development needs	29
4.3.2	Level at which employee training and development needs are identified	29
4.3.3	Employees involved in the training needs analysis at GCL.....	30
4.3.4	Effectiveness of training needs analysis	31
4.4	Organizational training and development culture and employee performance at the GCL..	32
4.5	Ways to improve development and training at GCL	34
4.6	Methods of Training and development and Employee performance at the GCL	35
4.7	Effects of Training and development on employee performance the GCL	36
4.7.1	Employee perception on the Effects of Training Development on employee performance at GCL.....	36
4.7.2	Effects of Development and training on performance at the GCL: Clients' demographic	37
4.7.2.1	Effects of Development and Training on Performance at the GCL: Clients' Perception.....	38
CHAPTER FIVE.....		41
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....		41
5.0	Introduction	41
5.1	Summary	41
5.2	Conclusions	43
5.3	Recommendations	44
5.3.1	Recommendations for practice and policy	44
5.4	Areas for Further Studies	45
APPENDICES		52

APPENDIX A	52
RESEARCH QUESTIONNAIRE.....	52
QUESTIONNAIRE FOR CLIENTS	59
APPENDIX B	61
TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION	61

LIST OF TABLES

Table 3.1: Target population: Different categories of staff.....23

Table 4.1: Level of training needs analysis.....30

Table 4.2: Employees involved in training needs analysis.....31

Table 4.3: Effectiveness of Training Needs Analysis.....32

Table 4.4: Effect of organisational training and development culture on employee performance.....33

Table 4.5: Ways to improve training and development.....34

Table 4.6: Methods suitable for training35

Table 4.7: Effects of training and development on employee performance.....36

Table 4.8: Effects of Training and development on Performance: Client’s perception.....39

LIST OF FIGURES

Figure 1:1: Conceptual model.....	21
Figure 4.1: Respondents' Work Experience.....	27
Figure 4.2: Respondents Highest Level of Education.....	27
Figure 4.3: Ages of Respondents.....	28
Figure 4.4: Frequency of Determining Training and development needs.....	29
Figure 4.5: Period of client's business with the GCL.....	38

LIST OF ABBREVIATIONS AND ACRONYMS

CWC:	Chemical Weapons Convention
CBRN:	Chemical, Biological, Radiological and Nuclear
GCL:	Government Chemist Laboratory
GOK:	Government of Kenya
HRD:	Human resource development
HRM:	Human Resource Management
MOH:	Ministry of Health
OJT:	On-the-Job-Training
TNA:	Training Needs Analysis
UNODC:	United Nations Office on Drugs and Crime

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Worldwide, globalization is posing challenges to majority of organizations forcing them to rethink the way they manage their resources particularly their human resources. Globalization can raise opportunities as well as threats to an organization especially in regard to technology. Therefore, organisations need to continuously develop their human resource and adapt to new technology in order to improve their performance (Gilmore & Williams, 2013). To compete and survive organizations must take into consideration changes taking place in both their internal and external environments (Pettigrew & Whip, 1991). Similarly, Rowden (2001) postulates that an organization should be able to learn as it grows for it to survive in cases of unforeseen and tumultuous business conditions. According to Kreitner and Kinicki (2007), more often than not, a gap exists between the abilities and knowledge required vis-a-vis the abilities and knowledge that the employees have in order to perform their jobs effectively. Employees need to be able to accommodate the changing technical requirements and learn other job skills that allow them to remain marketable and challenged (Lyster & Arthur, 2007).

The most crucial resources in any organization are the employees and they play a very important role in building an organization's competitive advantage (Mensah, 2013). Employees contribute greatly to the overall performance of any organization. Evidence has shown that successful organizations are mostly those that appreciate the importance of their workforce and consequently ensure that they have the required skills to perform their jobs. Therefore, organizations need to develop and train their staff because of the expected outcomes. For instance, human resource personnel are expected to formulate, initiate and oversee the implementation of the training procedures with the aim of having the trainees equipped with knowledge and skills required for addressing the gap in the performance of the organization (Farooq & Khan, 2011). According to Beardwell and Hidden (1994), training and development can change the attitude, knowledge or skills of the trainee and thus enable the organization achieve effective performance. Training activities that cause an observable positive change enable employees to be equipped with the knowledge needed to do a given job without making mistakes (Robert, 2006). Apart from raising

the workers' performance, training and development also enables an organization to have the desired image worldwide (Jia-Fang et al, 2010; Jia-Fang, 2010).

Organizations are therefore endeavoring to invest more in training and developing their staff so as to retain the best talent and thus remain competitive (Mudor & Tooksoon, 2011). As Mensah (2013) points out, employees in an organization can play a critical role in differentiating successful organizations from the unsuccessful ones. Employees contribute immensely to the overall performance of any organization and hence give it its distinguished achievements (Bontis, Dragonetti, Jacobsena and Roos, 1999). Krishnaveni (2008) has similarly pointed out that employees contribute critically in the realization of the organizational objectives as well as goals. Thus an organization's success is dependent upon high performing employees (Sims, 2002). Since the workers are the most essential assets in an organization, they are deemed to be the ultimate source of organizational success (Wentland, 2007). Organizations should therefore find ways of unlocking the potentials of their employees.

Indeed, skilled employees are not only important to individual organizations but to the relevant countries especially developing ones. According to King and McGrath (2002), training is shifting from a certificate based to a competency focus in skills development and the authors view this shift as a major trend across Africa. For a developing country, a skilled workforce means improved standard of living for its people (Department of Labour of South Africa, 2005). The training and developing of the public officers improves on the administration and quality of the policies made. Consequently, training and developing of public officers is recognized as well as embraced by the government of Kenya. In the Code of Regulations for public servants, the government has formulated policies on training so as to continually upgrade the capacity of public servants (GOK, 2006). Since the nature of government work has become more complex, knowledge intensive and non-routine, and the environment in which public agencies operate has become more turbulent, training and developing of the employees has become urgently necessary.

Immediately after Kenya gained independence in 1963, there was a concerted effort by the government to train indigenous Kenyans. Consequently, the Kenyanization program was developed. The objective of the program was to train Kenyans who could occupy vacant positions which had earlier been occupied by the departing colonial administration. However, the Kenyanization program did not produce results fast enough (Kamoche, Yaw, Horwitz, & Muuka,

2004). Though the Kenyan government started offering services, there were many difficulties since there was acute shortage of qualified professionals, technical and managerial staff who were required to match the growing number of institutions. In 1970s the government developed a program aimed at professionalizing the service by addressing the challenges that had been experienced (GOK, 2017). It was discovered that insufficient evaluation on employee development activities, the impact it made on public service performance and lack of well-organized approach to human capital management adversely contributed to the challenges (GOK, 2015).

During 1980s, Kenya was going through economic crisis and the government introduced Structural Adjustment Programs since there was need to develop policies which could address the economic crisis. The Structural Adjustment Programs comprised of policy measures to find effective solutions to macroeconomic problems (Storey, Wright & Ulrich, 2009). In Kenya, training of public servants went through a paradigm shift. Policies that emphasized on short term courses which are aimed at addressing identified performance gaps were developed (GOK, 2000). The government merged staff management and civil servant training functions with a view of ensuring effectiveness and efficiency in service delivery. Short management and leadership courses were designed and training was offered and to a greater extent funded by government and this practice is going on to date. By doing this the government hoped to improve quality of services that it offers to its citizens as well as enhance the implementation of the constitution thereby aiding in the realization of vision 2030. The government of Kenya also notes that adequate education and training are essential elements in any structural adjustment policy and helps countries to make better use of their human resource. Currently there is advancement in information and communication technology and globalization hence the need to transform cultures of organizations and attitudes of employees so as to meet the demand of the rapidly changing environment (GOK, 2015).

As emphasized in the Code of Regulations for public servants, the government has formulated policies on training so as to continually upgrade the capacity of public servants (GOK, 2006). Since the nature of government work has become more complex, knowledge intensive and non-routine, and the environment in which public agencies operate has become more turbulent, training and developing of the employees has become urgently necessary. Currently in the spirit of delivering quality services to Kenyan citizens and restructuring the public service, the government

through public service commission has developed procedures and guidelines in a view of developing and training its workforce (GOK, 2017). The commission understands that training should aim at addressing identified performance gaps hence the need to base training activities on the findings of training needs analysis. The commission has put in place a framework that provides information on development and training of its work force and expects it to enhance transparency as well as ensure equal opportunities for training.

The government chemist laboratories (GCL) which is the focus of this study, is a department in the ministry of interior and co-ordination of national government. It is the Central Chemical Testing Laboratory for the Republic of Kenya with its headquarters in Nairobi and branches in Mombasa and Kisumu. It was set up in 1912 as an independent section of the National Public Health Laboratories in the Ministry of Health to offer forensic and analytical laboratory services. It was later transferred to Office of the President in March 1976 and was moved back to the Ministry of Health in 1999. Recently it was transferred back to the Ministry of interior and co-ordination of national government under Executive Order No 1 of 2018. Some of the duties of the GCL include provision of forensic science laboratory services in administration of the criminal justice; provision of analytical laboratory services for testing water, foods, drugs and chemical substances for quality, safety and conformity with the set standards; provision of scientific crime scene support services to law enforcement agencies; provision of clinical laboratory services to some hospitals; coordination of all matters related to the Chemical Weapons Convention (CWC) in the country and overseeing the implementation of the Chemical, Biological, Radiological and Nuclear (CBRN) initiative (www.opcw.org).

Training and development of human resource at the GCL is extremely important since forensic scientists in the laboratories play an important role in analyzing evidential materials from scenes of crime and finally defend their findings in courts of law and also testing for quality standards in water, foods, drugs and chemical substances as required. Therefore, the criminal justice system in the country in many cases depends on the outcomes of analysis from the GCL that aids in the investigation and prosecution of crime. The GCL aims at employing modern laboratory techniques that rely more on science than traditional evidence, hence providing reliable evidence to investigating officers. In some cases, defense lawyers are very knowledgeable in science and will ask interrogative questions, hence the laboratory analysis should be as comprehensive as possible.

Therefore, in order to perform their jobs effectively, GCL employees require continuous skills, knowledge and methods advancement through training and development.

1.2. Statement of the Problem

Technology is changing very rapidly to respond to growing needs and expectations of an increasingly well-informed and demanding clientele. Any organization that fails to equip its human resource with newer skills and competencies has a high possibility of becoming obsolete (Tapomoy, 2009). In order to meet their mandate, the employees of GCL are continually engaged in sampling, extraction, separation and identification of evidential materials from scenes of crime, specimens from hospitals and products from manufacturing industries. The law enforcement agencies are the main clients of GCL and some court proceedings cannot be concluded without the findings of the expert witness from GCL. In some instances, a magistrate or a judge may to a great extent rely on evidence generated from the GCL to convict or exonerate a suspects of crime.

Employees of the GCL come from a wide range of discipline such as chemistry, biochemistry, environmental science, food science and forensic science. However, although these employees have the required educational background, they still require specific training in relation to analytical techniques used in forensic laboratories. For instance, after the crime scene personnel identify and collect biological and physical evidence, it is the duty of the forensic scientists working at the GCL to analyze the samples that have been submitted and provide a report to the law enforcement agencies. These reports must be accurate and based on a sound scientific foundation. Therefore, the GCL staff needs to be updated on the latest technology, materials, new skills and methodology. Professional technical staff should be capable of analyzing the different types of exhibits from scenes of crime in order to provide reliable scientific reports to criminal justice system (UNODC, 2011).

As public officers, it is assumed that forensic scientist undergo continuous training. There is a government policy requiring the training of every government employee for at least five days every year and the induction of newly recruited or transferred civil servants (GOK, 2016). However, there have been performance problems leading to the questioning of the effectiveness of the training and development received by the forensic staff at the GCL. For instance, there has been delays in analysis of evidence materials which at times leads to suspects to be held in cells for a

longer time thereby denying them justice. Sometimes the laboratory analysts are not able to comprehensively analyze the exhibits received from the clients using the available laboratory techniques and this leads to frustrations of both the analyst and the client. Though GCL employees have the right educational background and are trained as required by the employer for career progression, at times they fail to provide convincing laboratory results to the consumers of their services hence there was need to determine whether training and development of forensic scientists has any effect on the performance of employees at the GCL. This study, therefore, sought to establish the effect of employee training and development on performance of forensic scientists working at the GCL. Although there have been many studies on the impact of training and development on employee performance in Kenya (Orina, 2011; Ombui, Kagiri & Omoke, 2014; Ahmed, 2014; Onyango & Wanyoike, 2014; Zam, 2017) none focused on the effects of training and development on employee performance at the GCL.

1.3 Research questions.

The main research question of the study was; what are the effects of training and development on employee performance at the GCL? This research was guided by the following research questions:

- i. What is the effect of training needs analysis on employee performance at the GCL?
- ii. What is the effect organizational training and development culture on employee performance at the GCL?
- iii. What is the effect of training and development methods on the performance of GCL employees?

1.4 Research objectives

The broad objective of the study was to establish the effects of training and development on the performance of employees at the GCL. The specific objectives were:

- i. Establish how training needs analysis affects employee performance at the GCL.
- ii. Find out how organizational training and development culture influences employee performance at the GCL.
- iii. Determine how the training and development methods used at GCL influence the performance of GCL employees.

1.5 Justification of the Study

This study findings will form a reference for the policy makers in forensic science facilities and also the academicians and researchers. Forensic scientists are tasked with carrying out crime scene investigation, at times informing the investigating officers during the collection of exhibits, carrying out laboratory examination, interpreting laboratory results and finally reporting their findings. Establishing the effect of training and developing of staff on performance is an advantage to the policy-makers at the GCL and other similar institutions. The outcome of this research will assist both the line managers and human resource managers when deciding on the best way of identifying training needs and also in identifying and minimizing factors that may hinder effective designing and implementation of training and development programs and also in selecting the best and most appropriate training and development methods for the various categories of staff who work at forensic facilities.

Information on identifying appropriate training techniques for the different categories of staff will guide the human resource management department when preparing training programs, guide the finance department during the allocation of funds thereby reducing wastage of resources. Apart from reducing wastage of resources, delivering training using methods recommended by participants will be expected to raises the degree of participation during training and as a result lead to improved performance. The findings of the study will also guide on which training programs to come up with so as to address the expectations of the clients. Hence implementation of the findings of this study is likely to raise the performance of the forensic scientists which in turn will raise the satisfaction of GCL clients.

The current body of information in relation to effects of staff development and training and the influence it has on staff achievements will be backed by the findings of this research. This study findings will be beneficial when other researchers and academicians are identifying areas of further study. Considering that no known study had been carried out specifically focusing on the effects of development and training on the achievements the forensic analysts, this study will fill the knowledge gap in this area.

1.6 Scope and Limitations

Though the GCL has offices in Mombasa and Kisumu, this study was limited to the GCL in Nairobi. Employees working in forensic laboratories require similar skills and knowledge since procedures in forensic laboratories are to a great extent very similar, the outcome of the study will be considered valid to the other forensic laboratories. It was also necessary to limit this research to GCL headquarters (Nairobi) since the study was not adequately funded and time required to carry out the study was limited.

The data collection exercise was hampered by some respondents not being comfortable when releasing the required information for fear of victimization since they didn't know what the use of the data was. However, most respondents completed the questionnaires willingly after being explained to that their views were only required for academic reasons and that the findings would be made available to them if they wanted. The researcher also promised to keep the respondent's identity anonymous.

1.7 Definition and Operationalization of Key Concepts

Attitudes are combinations of beliefs and feelings that predispose an individual to do things in a particular way (Krishnaveni, 2008). Attitude is the way a person understands or explains a state of affairs (Ranganayakulu, 2005). In this study, attitude is understood as having an inward persuasion towards or against something or someone which may affect performance of an employee.

Development is the process of becoming aware of what a person is able to do by providing learning and educational experiences (Armstrong, 2012). Development is an intentional and purposeful effort to build skills, functioning teams or enhance institution achievement (Swason & Holton, 2009; Wilson, 2012). According to Nadler and Nadler (1990), development is gaining knowledge for growth of an employee but not only for current jobs but also for future and higher level positions. This study will adopt Nadler and Nadler (1990) definition of development.

Employee performance is something that an employee actually does and can be measured (Williams, 2002). Performance is the product of the interaction of two components; force and ability (Vroom, 1964). In this research performance of employees means the output of the workforce in an institution.

Human resource development (HRD) is defined as the procedure of building competencies among individual employees and work teams to improve staff achievement (Swanson & Holton III, 2009). HRD refers to the improving of capabilities to uplift institutional performance (Gilley & Egglund, 2002). In this study HRD referred to the well-organized planned effort meant to build the performance of an employee.

Human Resource Management (HRM) entails recruiting, improving, maintaining and using a labor force so as to economically and effectively achieve an organization's objective (Randhawa, 2007). It is management's use of employees' efforts, competencies and behaviors in order for them to contribute to the survival of the organization (Watson, 2010). This study adopted Watson's definition of HRM.

Knowledge is a combination of experiences, ideas and information in the possession of an employee that impact the way they do their work (Davenport & Prusak, 1998). This study adopted Davenport and Prusak's definition of knowledge.

Learning refers to the process by which an employee gains and improves knowledge, skill, capabilities, behaviors and attitudes (Armstrong, 2012; Reynolds, 2002). Learning is a natural response to coping with change (Handy, 1990). This study used Armstrong and Reynolds 's definition of learning.

Skill is the specific abilities resulting from knowledge, information, practice and aptitude (Madhurima & Sheetal, 2009). Skills are the ability to perform physical and mental tasks (Dransfield, 2000). This study adopted Madhurima and Sheetal's definition.

Training is a deliberate effort to facilitate acquiring of skills and knowledge related to an employee's job (Raymond, 2010). It is the planned and organized activity to impact skills, techniques and methodologies to employees for contributing to the performance and success of the organization (Tapomoy, 2009). This study adopted Tapomoy's definition.

Training Needs Analysis is the way of establishing performance gaps caused by lack of knowledge or skill (Rothwell & Kazanas, 2011). It is the process of assessing whether a performance gap can be addressed by training (Madhurima & Sheetal, 2009). This study used Madhurima and Sheetal's definition.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter covers the literature reviewed for the study which consisted of books and scholarly articles. The objectives of this study guided the literature review process hence the sections of this chapter are arranged in line to the objectives of the study. The sections include: the meaning of training and development; training needs analysis; organizational training culture; training and development methods; training and development and employee performance.

2.1 Meaning of Training and development

Although the terms training, development, learning and education are often used interchangeably the terms have different meanings (Marchington & Wilkinson, 2002). Training is the process of upgrading an employee's competencies so as to improve the employee's performance in their current roles. An organization undertakes employee training with the objective of modifying their behavior, raising levels of competencies and effectiveness of the employees (Gordon, 1992). The government of Kenya recognizes training as the most cost-effective intervention for improving human resource abilities in any institution. Training is identified as an activity that plays a crucial role in enhancing performance in order to achieve national goals and objectives (GOK, 2015).

According to Giri (2008), training is a procedure that aims at acquiring of information, improving of skills and changing attitudes and behaviors with a view of improving the performance of the employees. Training is mostly designed to smoothen the development of employee's capabilities that are required to accomplish ones duties. Christiansen, Sysoeva, Udovikina and Ketova (2019) argue that usually, generic competencies are acquired at school and precise skills are learned on-the-job. They also point out that school programs often fail to provide young employees with generic skills leaving the burden of providing such skills to the recruiting institutions. Training involves establishment of training needs, deciding on the method of training, designing a training program, executing a training program and finally evaluating the training. Timely training keeps personnel informed of crucial changes and new creativities in their market, thus ensuring they are equipped enough to address most of expectations of the organization's stakeholders.

Employee development is the combined set of designed activities offered overtime to help ensure that all workers have the competence required to fulfill their tasks to their maximum potential (Jacobs & Washington, 2003). Swanson (2001) defines employee development as an activity that enables employees to keep pace with the new developments in the market in order to succeed. Wilson (2005) notes that most of the time organizations put a lot of effort in training its employees to meet immediate targets but fail to prepare the employees for future market requirements. Jones (1990) has noted that though the significance of training has been acknowledged by most employers and huge financial resources spent when delivering training, it has not been established whether this training has an impact on organizational performance. Human resource departments in the public service play a crucial role in improving performance through systematic development of knowledge, skills, attitudes and values of employees so that they can contribute to the realization of national objectives and goals. The department has introduced such training methods as coaching, mentoring, carrier guidance and counselling with an aim of improving performance through employees training.

Basic education on laboratory analytical skills as well as specific skills required to perform specific jobs are necessary for all technical staffs working in all areas of specializations in GCL. Forensic science is where science relates with law and this results in a wide scope of study area. Training of forensic scientists is required to keep abreast with advances and changes in technology. Training refers to the act of imparting a skill that can be repeated on demand while development is a process in which the ability to reason and discern matures (Bruce & Cooper, 2006). The findings of this study established how employee development and training at GCL is affects their performance.

2.2 Training needs analysis and employee performance

An effective and efficient training program should consist of assessing of training needs, deciding on the method of training, designing a training program, executing the program and then assessing the exercise at the end in order to determine the effectiveness of the training program. All training should start with a training needs analysis (TNA) process. Assessment of employees' training and development needs is an important phase which determines the effectiveness of a training program and helps in specifying the direction for the development and training effort (Pearn, 2008). TNA is the process of establishing if a training need exists or in case it does, which skills are required to fill the performance gap (Madhurima & Sheetal, 2009). According to Madhurima and Sharma

(2009), TNA is important in the establishment of performance gap that can be addressed by training and deciding the best training to offer. Armstrong (2010) suggests that TNA may be performed at three levels: organizational needs; group needs; and individual needs. Moskowitz (2008) argues that the action of examining training needs assists in the establishment of the type of capabilities required to fulfill a given task.

According to Jack (2003), TNA is a very critical issue for identifying performance deficiencies. Wilson (2005) and Jacobs (2003) argues that not all issues of poor performance can be solved by training therefore a TNA is needed to determine whether training is actually necessary. For any training and development to be successful, performance gap should first be establishing which in turn gives a lead on the training required to address the gap. In the event that the required training has not been systematically identified the exercise of training may lead to waste resources on irrelevant or unnecessary training. Simmonds (2003) argues that in order for training to have an impact on the performance of the organization, analytical techniques which identifies the strengths and opportunities of an organization and also its threats and weaknesses should be employed prior to training activity.

A TNA enables trainers to design and implement an appropriate development and training procedure. Trainers are expected to pass information in an interesting way which attracts the trainees and creates interest in the course subject. Success of any training program is determined by the measure to which participants gain knowledge and make practice of the achievements made during the training exercise (Sharma, 2016). Lack of effective training needs analysis may lead to one size fits all kind of training which does not take learners' preferences and abilities into consideration. Most training procedures are too generic, and not geared towards acquisition of specific roles or skills. Regrettably, generic training can pressure learners' time and patience by trying to influencing them to engage with irrelevant content (Mustafa, 2007). Analytical techniques employed in forensic laboratories keep changing with the rapid change in technology and laboratory processes hence TNA is necessary so as to design a relevant development and training program. The study sought to find out how development and training needs at the GCL are determined because from the above literature if TNA process is not undertaken in the right way an organization may end up offering irrelevant training or even training the wrong category of staff and this is likely to translate to wasted resources in terms of time, trainers and finances.

The literature review revealed that training needs analysis is crucial in the process of employee development and training since it helps in identifying performance gap and in directing the development and training programs (Jack, 2003; Pearn, 2008; Madhurima and Sharma, 2009). According to Alison (1987), TNA should incorporate data and opinions from varied sources so that the decision makers can make effective decisions. Moskowitz (2008) argues that the action of examining training needs assists in the establishment of the type of capabilities required to fulfill a given task. Mastafa (2007), concludes that lack of an effective training needs analysis may lead to inappropriate training programs.

2.3 Organizational Training Culture and Employee Performance

Wentland (2007) defines organizational culture as a common procedure of doing something in the organization or in other words how things are usually done in the organization. An organization's culture establishes workplace parameters that determine the overall competence of an organization to formulate and achieve strategic objectives. Therefore, the type and level of training that an organization ultimately provides is determined by the strategic goals of an organization and its culture. An organization's culture is a key factor in the process of planning, setting of the organization's strategic goals and objectives, achievements and competitive advantage. At times, culture may indirectly affect performance and has been linked to service quality and employee performance (Swartzlander, 2004).

Garavan, Costine and Heraty (1995) argue that in many organizations, culture change and training activities follow an ad hoc pattern and the need for training is rarely emphasized. In small owner-managed or family firms, key decision-making is the natural preserve of a small core group of people hence training requirements and the nature and extent of training activities are usually dictated by the central power hence individual development and training needs may fail to be addressed comprehensively (Garavan et al., 1995). Wilson (2005) notes that most of the time organizations put a lot of effort in training its employees to meet immediate targets but fail to prepare the employees for future market requirements.

For effective growth of staff to be achieved in organizations, it is recommended that the organizations provide environments conducive to learning, facilitate training initiatives and support employee development (Coetzee, 2007). The management should ensure that they have set aside resources for training programs and encourage the employees to feel comfortable using

the new knowledge and skills learned. Employees who perceive adequate support from the management easily acquire new knowledge and learn new skills.

Krishnaveni (2008) has identified characteristics of an employee, the training criteria and the job environment as key factors that may promote or hinder hindering employee. Assessing employees' abilities, their level of motivation and their personality type before designing the training program is a very useful technique for imparting maximum learning to the participants (Landy & Conte, 2010). This is supported by Brown, Le & Schmidt (2006) and Ree & Carretta (2002) who state that general mental ability is predictive of performance in training. Some Trainees have less ability and hence they take longer to learn and this results in increase in the length of the training period and use of more resources. According to Fleishman & Mumford (1989), when trainees with similar ability are grouped together, trainers can proceed through a material at a pace appropriate to the backgrounds of the participants. The learner should be prepared and willing to acquire new knowledge and learn new skills, have an open mind and willing to accommodate a new way of thinking and performing. By understanding how employee characteristics may affect the success of a training program, the HR manager or trainer can use this to design more appropriate training programs.

Other factors that may hinder learning in an organization include lack of financial and moral support from top management, lack of moral support from peers, wrong attitude from the individual employee, job-related factors and inappropriately designed training programs (Haslinda & Mahyuddin, 2009). Prasad (2012) suggests that organizations can make deliberate efforts to influence the culture through various organizational development processes to make it a nurturing climate for working in the organization. The author is of the opinion that new employees in organizations seek for a culture of work which give room for learning, self-development as well as career development on ongoing basis and also give opportunities for more challenging jobs.

The physical work environment can also affect the development of an organization's human resource (Briner, 2000). A physical work environment is the environment in which employees may include aspects such the level of heat, work equipment, workload and complexity of tasks to be accomplished. Normally a better physical workplace environment affects employees' performance positively because it will facilitate the implementation of the skills learned (Farh, 2012). By identifying work environment factors that may hinder development and training at GCL,

management can be able to address these factors and thus facilitate and improve development and training at the institution.

2.4 Training and development Methods and Employee Performance

The existence of various traditional methods as well as new training and development methods that may be used by organizations has been established (Bohlander & Snell, 2010). As a result of progress in technology and greater knowledge of human character, the two authors argues that newer methods have emerged which are more effective. Such methods include both training on the work premises and training away from work environment training methods. On-the-job training (OJT) methods are mostly applied when preparing new employees so that they can handle more challenging tasks in future, though it can also be used to upgrade or widen skills of the human resource when new technologies are introduced (Cannell, 1997; Bohlander, 2010). OJT is carried out on the job and involves an experienced employee working with the trainee taking the form of one-to-one instruction (Sims, 1998).

According to Barron, Berger and Black (1997) and Phipps (1996), most organizations apply OJT methods due to their advantages. Sims (2006) argues that OJT require minimal resources and has quick returns. The other advantage is that no time is lost and the employees continue to work as they train. Bohlander and Snell (2010) point out that OJT enables the trainee to learn how to perform a job practically in the workplace under normal conditions and the trainer has a good chance of developing an appropriate relationship with new recruits. The authors further argue that although OJT is viewed to be the best method of enhancing learning in the workplace, however most of the time it is not appropriately delivered because poor organization of the training, managers lack adequate training skills and the method doesn't have a well-defined way of measuring performance. Common OJT methods include: coaching, mentoring and job rotation.

According to Alan & Robert (2011), coaching is an OJT method whereby a more competent person assists a less competent worker to build the practical competences and skills necessary to perform his or her job. Coaching is an approach used to enable employees develop their skills and knowledge and raise their performance (Armstrong, 2012). Alan and Robert (2011) argue that coaching entails the organized use of chances available in work environment to build and raise employee capabilities and potential. According to Sims (2006) coaching is typically used for employees and high-level executives who hold visible and somewhat unique jobs when traditional

forms of OJT are impractical. The coaching method will work best if the coach is experienced in coaching and has the capability to disseminate information as not all supervisors make good coaches. This type of training will work well for new employees at the GCL whereby they will be shown how to collect and analyze evidential materials.

Mentoring involves close instruction where a senior employee and a junior employee work together. The junior employee receives instructions, is supported and assisted to learn the ways and is equipped for greater responsibility (Jon & Randyl, 2011). Sarah and Mullen (2012) argue that mentoring can also be seen as a scheme aimed at bringing out the full potential of a person hence enabling the person handle both present and future goals. According to Price (2004), mentors are senior managers who can give support, direction and assistance to less experienced employees and hence should be able to perform the job of their mentee. Through mentoring, the mentee gains not only work skills but life skills.

Job rotation is a temporary switching of job assignments as a result of which the employees develop new skills and get opportunity to learn more about the organization operations (Durbin, 2008). Sharma and Goyal (2013) argues that job rotation is a very useful method for developing employees' careers. Since there are different stages in the processing of evidential material at the GCL, a new employee can rotate through these stages at determined intervals. By highlighting the benefits of OJT, information from the study can assist the managers decide which training method is applicable and appropriate.

Off-the-Job training method provides a chance for a set of employees to receive information on specific topics at a classroom setting environment (Jacobs, 2003). In a classroom setting it is possible to apply a wide range of methods of delivering information such as simulation, films, debate, seminars, workshops, experimental methods, computer-based training and lecture (Werner & DeSimone, 2011). Cherrington (1995) argues that lectures do not allow active participation by the learners and does not provide practice, feedback, knowledge of results and may prevent transfer of learning. To prepare learners mentally it is sometimes necessary to isolate or remove them from the workplace so that they can be separated from normal work activities. Lawes (1996) argues that lecture or classroom setting provides direct medium of communication and an opportunity for exchange of ideas between the trainees and the trainers. Off-the-job training enables trainees to learn new skills away from the pressures of a work environment (Armstrong, 1998). However,

Rothwell, Gerity and Gaertner (2004) are of the view that classroom training is an inadequate solution when practical skills are required.

Conference method is also an off the job training method which is widely used by many organizations to train their employees (Samanta, 1993). Samanta argues that conference method is usually conducted according to an agenda previously identified, pre-discussed and a training design developed. During the training, the trainer holds a pre-session with the trainers before makings presentations related to training request. Trainees may form discussions groups after the presentations but discussions can also be carried out without the formation of small groups. The conference as a training method is advantageous in that a considerable number of employees can be trained at the same time and all concerns of the participant in relation to the subject of training addressed to a great extent (Samanta, 1993). Participants develop cognitive abilities and training materials can be used as reference materials after the training. The literature review indicates that training leads to high level of performance (Pfeffer, 1994, Guest, 1999; Linder, 2000; Giri, 2008). Training builds employee capability and raise job satisfaction which leads to improved performance (Batool & Batool, 2012 and Rogers, 2013).

2.5 Training and development and employee performance

Employee performance in an organization is likely to be affected by different factors including labor management relations, social and psychological work environments, remuneration, physical exhaustion and trade union way of doing things (Taiwo, 2010). Most of the time these factors control the actions the employee will take in a given situation and the expected results for such actions. According to Rowden (2001) training of employees is expected to enable organizations adapt easily to technological changes and hence enable the organization to compete, survive and prosper.

Studies by Guest (1999) and Pfeffer (1994) concluded that training leads to high level of performance. Rogers (2013) posits that the need to learn new skills, encourage education and self-improvement for everyone so as to raise the nature of work in organizations is the reason for training and development. Linder (2000) also argues that training of employees improves morale, increases organization's potential, enables employees to develop positive attitudes, raises employee commitment, make employees to be innovative hence making the organization to be more competitive and effective.

Kirkpatrick (2006) identified eight conditions required to make employees have the highest output. These include: making the work look more significant to the employees; selecting a person who is capable of doing the job; clarifying what are the job standards; training the employee in the necessary knowledge, skills, and attitudes; evaluating performance and communicating results and expectations to the employee; helping the employee improve performance; building and maintaining rapport with the employee and rewarding performance. Similarly, Batool & Batool (2012) posit that training builds employee capability and raises job satisfaction which leads to improved performance. Udaya et al., (2011) argue that an institution will accrue a number of advantages when the HR manager encourages employee development. They suggest that job enlargement, job rotation, employee promotions, various job experiences, education, skills development and interpersonal relationships are some of the ways through which organizations can use to enhance employee development processes.

Hung (2010) argues that the function of employee development and training raises work performance. The author explains that this is the reason why many famous organizations commit enough funds to employee training and developing programs. According to the author, the effectiveness of a training program can be assessed in terms of positive behavioral changes, increased attributes, knowledge and skills observable and results which can be measured and the reaction of the workforce in relation to expected outcomes of training and increase in productivity. The findings of study will add to knowledge by finding out how employee performance is affected by staff training and development.

2.6 Theoretical framework

This research is anchored on two theories namely Reinforcement theory and Human capital theory.

2.6.1 Reinforcement theory

Reinforcement theory is based on the psychological field known as behaviorism. B. F. Skinner (1953) was active in behaviorism research and pioneered the concept that he had labeled the theory of reinforcement. The theory states that individuals would tend to repeat activities that had positive outcomes and conversely behaviors that produced negative results in fewer of those behaviors. In many organizations, positive reinforcement is a management tool to reward desirable outcomes

from employees since providing some sort of reward to reinforce a good outcome creates incentives to repeat the outcome in the future.

The GCL is a forensic laboratory and a major stakeholder in the criminal justice system in Kenya. Some of the incidences where the institution has taken part in investigations include DNA analysis during the investigation of the “Miracle Babies” case (2003 & 2004), analysis of body specimens from settlers of Owino-Uhuru scheme in Mombasa County for lead (2010), analysis of food alleged to have been contaminated with aflatoxins (2004) where some people lost their lives and analysis of alcoholic drinks alleged to have been contaminated with methanol where some people were report to have died and others became blind; just to name a few. As a result of doing this challenging work the institution is highly recognized by the GOK. Training and development of GCL employees is a way of ensuring that the employees working in the laboratory have the competencies required to analyse different types of samples brought in the laboratory from different scenes of crime. Though the Directorate of Criminal Investigation have constructed laboratories where most exhibits can be analysed, they still seek laboratory services from the GCL.

Employee training and development equips employees with required skills to perform a given job hence enabling employees to be more productive making them to be possible candidates of reinforcement. The study found that training and development led to improvement in key areas of the employee performance due to increased employee capabilities

2.6.2 Human capital theory

The human capital theory originated at the Chicago school of economics in the 1960s. Human capital theory states that individuals are worth investing in as a form of capital and that their performance and the outcomes achieved are considered as a return on investment and assessed in terms of costs and benefits. According to Garavan (2001), human capital is the form of competencies, information, social and character attributes including creativity embodied in the ability to perform labor so as to produce economic value. Shubhash (2019) argues that investments in human capital should focus on supporting individuals in attaining skills and knowledge that has an effect on one’s ability to do productive work. He notes that individuals acquire their own value which they achieve and is also raised through investment by their employer and themselves when they gain additional expertise, knowledge and competencies through training, development and experience. Garavan (2001) notes that the attainment of relatively high level of education or

investment in certain specialized academics or professional field plays a crucial role in the overall achievement of countries.

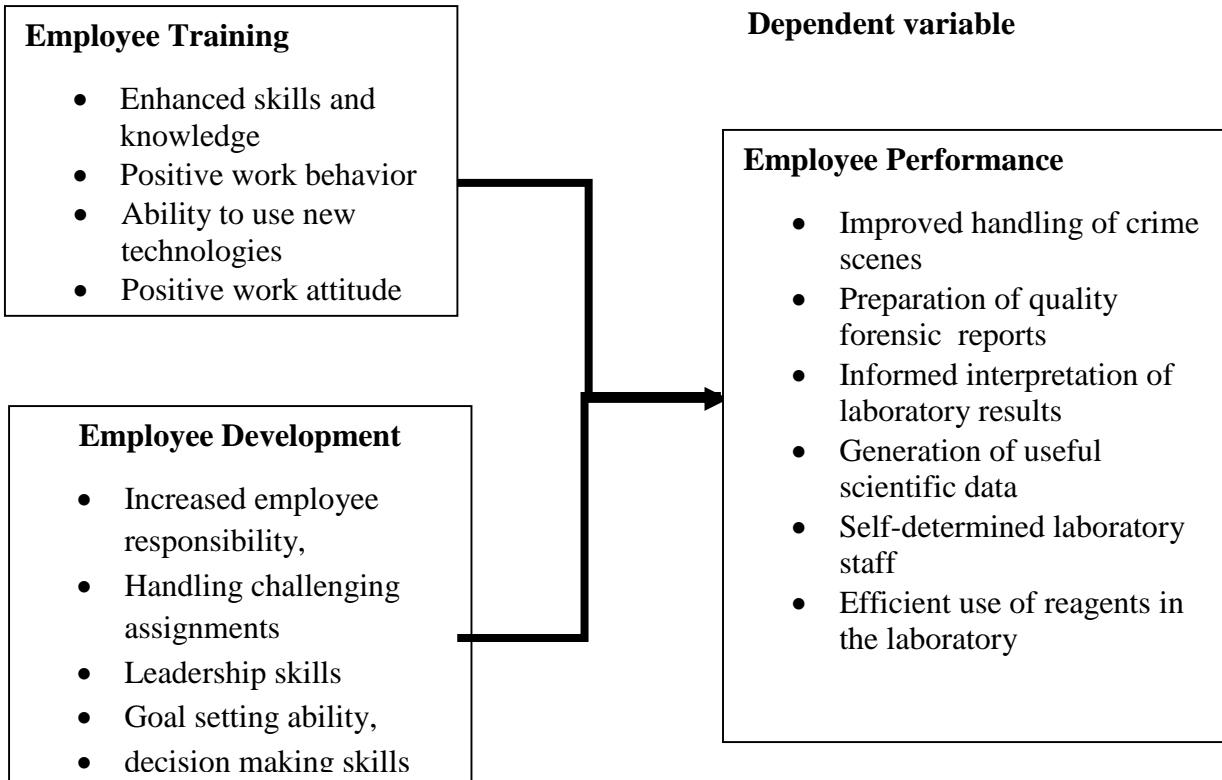
GCL is a department whose mandate is to offer laboratory services to law enforcement agencies, hospitals, manufacturing industries among others. GCL staff are aware of the consequences that results of laboratory analysis can have on the accused, complainant, patient as well as a manufacturing industry hence the need to raise the competencies of the laboratory workers. Procedures in the laboratory include; sample preparation, extraction and isolation of analytes, identification of the extracted analytes among others. Scientists keep on improving these procedures so as to make them more reliable, faster and environmentally friendly hence training of the GCL staff is crucial in making sure that the institution produce reliable results to it's clients in a timely manner.

2.7 Conceptual Framework

This research conceptualized that training and development positively influences employee performance. As shown by the conceptual model (Figure 2.1), training of personnel enables them attain, abilities and knowledge, positive work behavior, positive work attitude and ability to use new technologies which results in improved organizational achievement. Employee development enable employees become more responsible, make them able to handle challenging assignments, enable them to provide leadership, enable them acquire ability to set goals and make them able to make decisions which as a result raise the achievement of an institution. Employee performance is measured in terms of; improved handling of crime scenes, preparation of quality forensic reports, informed interpretation of laboratory results, generation of useful scientific data, self-determined laboratory staff, and efficient use of reagents in the laboratory.

Figure 2.1: Conceptual model

Independent variable



Source: Author, 2019

2.8 Hypotheses

H₁: There is a correlation between training needs analysis and employee performance at the GCL.

H₂: There is a positive relationship between training needs analysis and employee performance at the GCL.

H₃: There is a positive relationship between organizational development and training culture and employee performance at the GCL.

H₄: There is a relationship between methods of development and training and employee performance at the GCL.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the methods and procedures used in conducting the research. It covers the research design, population, sampling procedures and sample size, data collection and data analysis. It also presents the reliability and validity tests that were used.

3.1 Research design

A research design is the blueprint which the researcher followed while collecting study data and conducting the analysis process. It is a systematic structure that the researcher adopted while carrying out the data collection process, as it outlined the order of activities that were done. The study used a descriptive cross-sectional research design to establish the effects of training and development on employee performance at the GCL. The approach was desirable for the study because the researcher managed correct data in relation to training needs analysis, organizational culture, methods of training and development and employee performance at once. The study used both quantitative and qualitative data.

3.2 Population of the Study

The target population in a study is the entire aggregation of respondents that meet the designated set of criteria (Burns & Grove, 1997). The target population in this study was the 70 employees working at the GCL, Nairobi comprising managerial and non-managerial staff. Table 3.1 indicates the different categories of staff.

Table 3.1 Target population: Different categories of staff

Staff Category	Number of Employees
Senior managers	10
Laboratory managers	15
Laboratory analysts	45
Total	70

Source: Government Chemist Laboratories Nominal Roll ; 2019

3.3 Sampling Technique and Sample Size

A representative sample comprising of 59 employees was picked from the target population. The sample was picked using Krejcie and Morgan (1970) formula for defining sample size (Appendix B). In addition, a sample of 11 clients was randomly picked in the month of June year 2019.

3.4 Data Collection

The research involved the use of both primary and secondary data. Two questionnaire constructed by the researcher were used to gather primary data. The questionnaire was designed in line with the research objectives and had closed-ended questions. One questionnaire was to be completed by the GCL staff while the other was for the clients of the GCL. The questionnaire for the GCL staff consisted of close-ended questions which were organized into several sections according to the objectives of the study. The closed-ended questions used the five-point Likert Scale ranging from 1-5. A questionnaire for the clients was also constructed which consisted of 12 close-ended questions. The questionnaires were administered through a hand-delivery method. To raise the response rate the researcher made frequent follow-up to make sure as many responses as possible were gathered.

Secondary data was collected from the institutions documents including the strategic plan, human resource training manual, training reports. In addition, secondary data was garnered from published documents including books, journals and reports.

3.5 Data Analysis

The researcher subjected all the collected data from the field into a data analysis process which involved editing, coding and tabulation thereby developing the collected data into simpler summaries. The data was then entered into Statistical Package for Social Sciences (SPSS) for further analysis. Descriptive statistics was conducted where frequency counts, percentages, mean and standard deviation was obtained. Descriptive statistics is the term given to the analysis of data that helps the researcher describe, show or summarize data in a meaningful way such that patterns might emerge from the data which enable the researcher to draw conclusions based on the data analysis. The data was presented in graphs, tables, charts, standard deviation and means.

3.5.1 Validity and Reliability test

According to Wellington (2000), validity refers to the degree to which a research instrument truly measures what it is supposed to measure. The validity of the research instrument was enhanced through pilot test on 10 randomly selected respondents at the GCL. This was to determine whether the questionnaire was designed correctly. This was supplemented by the expert opinion from the supervisor and others from the proposal presentation. The questionnaire was thus improved accordingly.

Reliability is an important component in research design. Reliability is a measure of results reproducibility and it measure repeatability of the experiment. For this research, cronbach's alpha coefficient was determined by SPSS tool. Researchers use this method to measure the internal consistency reliability for a set of items. The method measures how well a group of variables or objects determine a single one-dimensional latent construct. The cronbach's alpha values have a range between zero and one but values above 0.9 are not appropriate as the scale might be too narrow in focus (Nunnally & Bern, 1994). The Cronbach's alpha value for this study was found to be 0.72. According Ringim, et al. (2012), Cronbach's alpha value of between 0.6 - 0.9 is strong enough for inference.

3.6 Ethical Considerations

Prior to carrying out of the study, the researcher, facilitated by the department of political science and public administration, University of Nairobi. The researcher also acquired approval from National commission for Science, Technology and Innovation to carry out the study. The researcher also sorts and acquired authority to carry out the study from Nairobi City County since the area under study is located in this county. Besides informing the management officially and the entire workforce of GCL the researcher addressed all concerns from the respondents and offered explanations where necessary. Provision of data was voluntary with a few who were not willing to participate also welcomed to do so.

CHAPTER FOUR

DATA PRESENTATIONS, ANALYSIS AND DISCUSSIONS

4.0 Introduction

In this chapter the findings are presented, analysed, discussed and interpreted. The sections covered in this chapter include: response rate; demographic information; training and development needs analysis and employee performance at the GCL; organizational training and development culture and employee performance at the GCL; methods of training and development and employee performance at the GCL; and effects of training and development on employee performance the GCL. Figures and tables were used to make the interpretations of the results of data analysis more clear.

4.1 Response Rate

The research instrument was distributed among 59 respondents and 37 questionnaires were duly filled and given back to the researcher. This constituted a return rate of 62.7% which is considered acceptable for statistical analysis. A response rate of 50% is considered good enough (Mugenda and Mugenda, 2003).

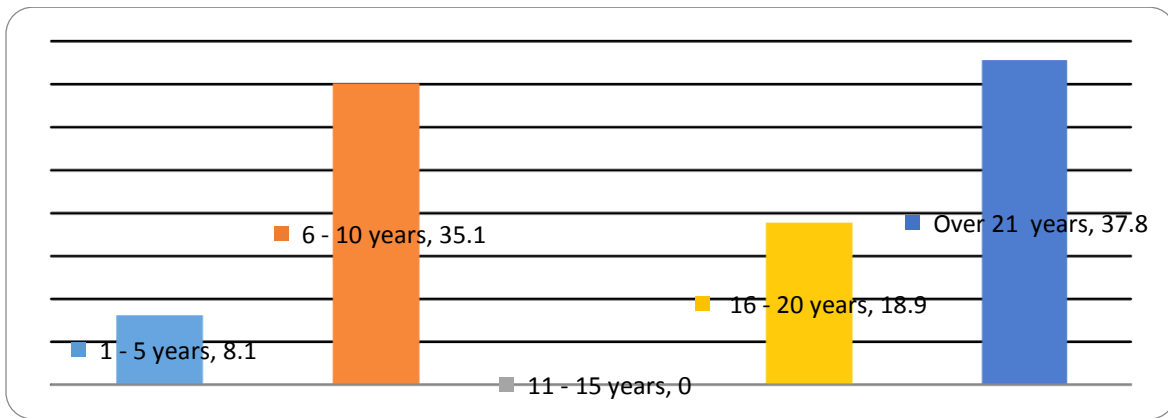
4.2 Demographic Information

This section evaluated the demographic information of the respondents in order to get the general feel of the study population in terms of work experience, education and age of the respondents.

4.2.1 Years of Experience

To establish the level of work experience, the respondents were required to indicate the number of years they had worked in their respective positions at the GCL. The responses are presented in Figure 4.1. From the figure, a majority of the respondents (37.8 %) had worked in the organization for over 21 years, 35.1% had worked for between 6 and 10 years, 18.9% had worked, between 16 and 20 years, 8.5% had worked for between 1 and 5 years. Overall 92% had worked at the institution for over 6 years. This means that the respondents had worked at the GCL long enough to provide valuable information on the effects of training and development on employee performance.

Figure 4.1 Respondents' Work Experience

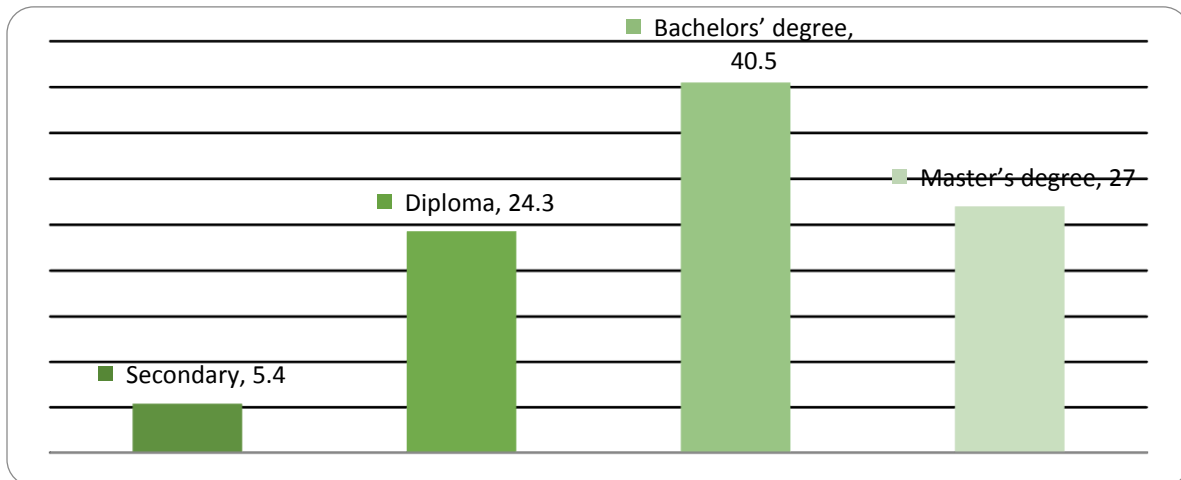


Source: Field data 2019

4.2.2 Level of Education

The researcher sought to establish the level of education of the respondents. The aim of the question was to determine whether the respondents have the necessary requisite education to undertake training and development courses that may be provided by the organization. The responses are represented in Figure 4.2.

Figure 4.2 Respondents Highest Level of Education



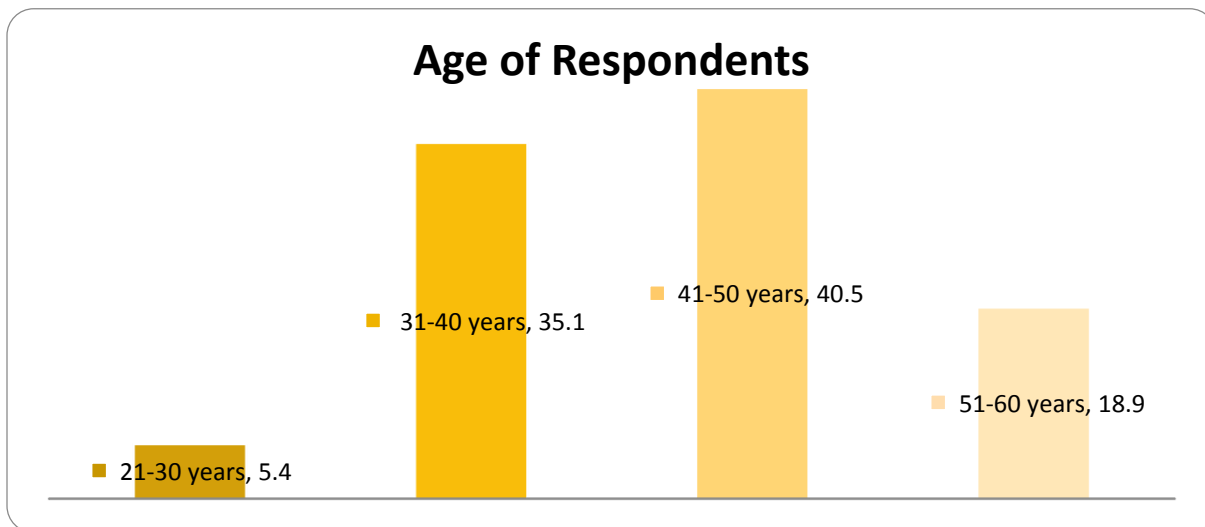
Source: Field data 2019

According to Figure 4.2, 5.4 % of the respondents had secondary education as their highest level of education, 24.3 % were diploma holders while the majority at 40.5 % were bachelor's degree holders and 27% were holders of master's degree. The fact that a majority have attained university education shows that the respondents were well educated and therefore had the requisite education to undertake training and development courses.

4.2.3 Ages of Respondents

To determine the viability of training, respondents were requested to provide their age. Their responses are presented in Figure 4.3;

Figure 4.3 Ages of Respondents



Source: Field data 2019

A majority of the respondents (40.5 %) were in the age bracket of 41-50 years. This was followed by 31-40 years at 35.1 % and that of 51-60 years at 18.9 %. The distribution of employees' age brackets is important for planning, training and development purposes. Overall, a majority of the workers have over 10 years before retirement; hence investment in training and development will be worthwhile for the organization and this can also facilitate smooth succession planning.

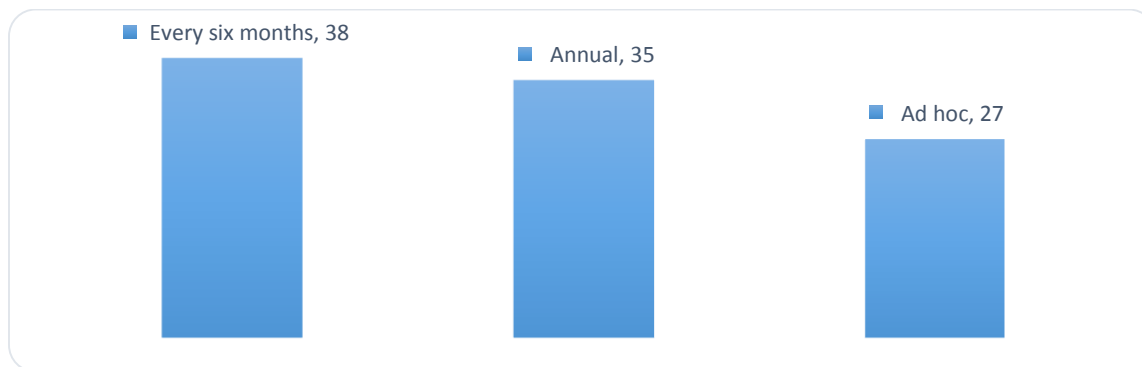
4.3 Training and development needs analysis and employee performance

In this section, respondents were asked questions on training and development needs analysis at GCL. The objective was to establish whether the way training needs are identified at the GCL affects employee training and development and consequently overall employee performance.

4.3.1 Frequency of Determining Training and development needs

To determine the frequency of determining training needs analysis, respondents were asked to state how often training needs analysis was undertaken in the organization. The responses are as shown in Figure 4.4.

Figure 4.4 Frequency of Determining Training and development needs



Source: Field data 2019

The findings in Figure 4.4 show that a large number of the respondents (38%) indicated that training needs analysis at the GCL is usually carried out every six months, this was followed by 35% who indicated that it was done annually and 27% who indicated that it was done on an ad hoc basis. The implication of this disparity in responses is an indication that either respondents are not aware of what TNA is, or there is no policy on training hence TNA is not systematic, which can negatively affect the development and training process at the GCL.

4.3.2 Level at which employee training and development needs are identified

This section is guided by the objective of establishing whether the level at which development and training needs are identified affects employee performance at the GCL. The respondents were required to express their responses using the following scale; 1=Very great extent, 2=Great extent, 3= Moderate extent, 4= Small extent and 5= No extent. The respondents were required to indicate the extent to which the listed levels of identifying training needs were used. The findings are represented in Table 4.1

Table 4.1 Levels of Training Needs Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Performance analysis	37	1.00	5.00	3.3514	1.20684
Organizational analysis	37	1.00	5.00	3.1622	1.14294
Job analysis	37	1.00	5.00	3.1892	1.28750
Individual analysis	37	1.00	5.00	3.1892	1.39120

Source: Field data 2019

The findings indicate that performance analysis was the most used to identify employee training and development needs with mean=3.3514 and organizational analysis with mean =3.1622. Both job analysis and individual employee tied with a mean =3.1892. This implies that the organization uses different kinds of analysis to identify training needs. A closer look at the standard deviations for all the variables reveals a tendency to cluster around one standard deviation away from the mean. The implication is the four types of analysis were almost equally used to identify employee training needs and development. This means that both the organization and the individual employees are involved in identifying training needs. This is supported by Alison (1987) who argue that TNA should incorporate data and opinions from varied sources so that the managers can make effective decisions.

4.3.3 Employees involved in the training needs analysis at GCL

In this section, the respondents were required to indicate the extent to which human resource department, the laboratory manager and individual employees are involved in the training needs analysis at the GCL. The respondents were guided by the following scale; 1=Very great extent, 2=Great extent, 3= Moderate extent, 4= Small extent and 5= No extent. The findings have been presented in Table 4.2;

Table 4.2 Employees involvement in the training needs analysis

	N	Sum	Mean	Std. Deviation
HR department	37	120.00	3.2432	1.29969
Laboratory manager	37	108.00	2.9189	1.23330
individual request	37	103.00	2.7838	1.27225

Source: Field data 2019

The findings in Table 4.2 indicate that the human resource department was usually involved during the identification of employee training and development needs with a mean 3.2432, this was followed by laboratory manager with a mean =2.9189 and individual request were least considered with mean =2.7838. The trend of the means implies that although the human resource department is the main source of TNA, laboratory manager and the individual employees equally play an important role in identifying training needs. From the findings it is evident that the three levels of employees were almost equally used to identify employee development and training needs.

4.3.4 Effectiveness of training needs analysis

This section was guided by the objective meant to determine whether development and training programs at GCL are based on training needs assessment and whether employees at GCL receive trainings relevant to their jobs. The respondents were required to state the effectiveness of the process used to identify employee development and training needs at the GCL, whether the current training needs analysis at the GCL will meet future development and training needs. The respondents used the following scale; 1=Strongly disagree, 2= disagree, 3= Don't know, 4= Agree and 5= Strongly agree. The responses are presented in Table 4.3;

Table 4.3 Effectiveness of the training needs analysis

	N	Sum	Mean	Std.D
Process used to identify employee training and development needs is effective	37	129.00	3.4865	1.09599
Current training needs analysis will meet future training and development needs	37	105.00	2.8378	1.11837
Training and development programs are based on training needs assessment	37	104.00	2.8108	1.28750
Employees receive training relevant to their jobs	37	95.00	2.5676	1.14359

Source: Field data 2019

The findings in Table 4.3 indicate that the respondents agreed to a great extent that the process used to identify employee training and development needs is effective with a mean =3.4865 as the most important variable, followed by current training needs analysis will meet future training and development needs variable with a mean= 2.8378 and training and development programs are based on training needs assessment with a mean= 2.8108 while the least placed variable was that employees receive training relevant to their jobs with a mean=2.5676. Overall a majority of the respondents agreed that the process used to identify employee training and development needs is effective implying that training is directed to those who need it and hence organizational resources are not wasted. This is in line with Moskowitz (2008), Wilson (2005) and Jacobs who argues that the action of examining training needs assists in the establishment of the type of capabilities required fulfilling a given task since not all performance gaps can be addressed by training hence TNA is needed to determine whether training is actually necessary.

4.4 Organizational training and development culture and employee performance at the GCL

In this section, the respondents were required to state to which extent the indicated factors influence employee performance. They responded guided by the following scale; 1=Strongly disagree, 2= disagree, 3= Don't know, 4= Agree and 5= Strongly agree. The results are presented in Table 4.4:

Table 4.4 Effect of Organizational training and development culture on employee performance

	N	Sum	Mean	Std. D
Non availability of expert trainers	37	143.00	3.8649	1.0842
Unwillingness of supervisors to release employees for training	37	140.00	3.7838	1.2278
Lack of formal method of evaluating of training imparted	37	130.00	3.5135	1.2387
Inadequate allocation of funds	37	100.00	2.7027	1.4115
Lack of top management commitment to employee training and development	37	100.00	2.7027	1.1514
Lack of employee participation in training and development policy	37	92.00	2.4865	1.2828
Unwillingness of potential trainees to undertake training	37	82.00	2.2162	1.0835
Employees lack of awareness of organizational training and development policy	37	66.00	1.7838	.94678

Source: Field data 2019

The findings in Table 4.4 indicate that non availability of expert trainers to a great extent with a mean =3.8649 was the leading barrier to employee training and development followed by the unwillingness of supervisors to release employees for training with a mean =3.7838. Lack of formal method of evaluating effectiveness of training imparted also hindered training and development to a great extent with a mean =3.5135. Those factors that were hindrances but not critical were; inadequate allocation of funds with a mean =2.7027 followed by lack of top management commitment to employee training and development with a mean =2.7027 next was lack of employee participation in training and development policy with a mean =2.4865 and unwillingness of potential trainees to undertake training with a mean =2.2162. Employees lack of awareness of organizational training and development policy with a mean =1.7838 was the least factor considered as a barrier to training and development. Garavan, Costine and Heraty (1995) established that in many organizations, culture change and training activities follow an ad hoc

pattern and the need for training is rarely emphasized. For training and development to be effective the organization has to adopt a conducive learning culture in which case most of these barriers have to be eliminated or minimized since employees are the most crucial assets of an organization and they are the ultimate source of organizational success (Wentland, 2007).

4.5 Ways to improve development and training at GCL

In this section, the respondents were required to suggest ways of improving development and training at GCL. They responded guided by the following scale: 1=Very great extent, 2=Great extent, 3=Moderate extent, 4= Small extent and 5= No extent, the respondents were required to indicate the extent to which the listed variables can improve development and training at the GCL. The responses are presented in Table 4.5:

Table 4.5 Ways to improve training and development

	N	Sum	Mean	Std.
Top management ensure effective formulation and implementation of the a training and development policy	37	56.0	1.5135	.8373
training and development of employees should be a continuous process	37	52.0	1.4054	.5990
Provision opportunities for training and development	37	48.0	1.2973	.5198

Source: Field data 2019

According to the study findings only a small number of the respondents with a mean=1.5135 felt that top management would improve training and development at the institution by ensuring effective formulation and implementation of the training policy. This was followed by those who felt that training and development of employees should be a continuous process with a mean= 1.4054. Those who felt that provision of opportunities for training and development would improve came last with a mean = 1.2973. Overall none of the options provided was rated very highly as a means of improving training and development at the organization. This study may have

missed on many other possible issues that can affect development and training outcomes e.g. adequate expert trainers who are able to deliver required knowledge during training. The study therefore accepts the hypothesis that there is a relationship between organizational development and training culture and employee performance at the GCL.

4.6 Methods of Training and development and Employee performance at the GCL

In this section, the respondents were required to indicate the extent to which they agree or disagree that the methods that were captured are suitable for developing and training employees at the GCL. They were guided by the following scale; 1=Very great extent, 2=Great extent, 3=Moderate extent, 4= Small extent and 5= No extent. The results are represented in Table 4.6:

Table 4.6 Methods which are suitable for training and development

	N	Sum	Mean	Std. Deviation
Coaching	37	68.00	1.8378	1.01416
Workshops	37	61.00	1.6486	.71555
Institutional training	37	60.00	1.6216	.98182
Mentoring	37	60.00	1.6216	.72078
Job rotation	37	56.00	1.5135	.76817
	37			

Source: Field data 2019

The findings indicate that the respondents agreed that the method most suitable for training and developing employees at GCL was coaching with a mean =1.8378 followed Workshops with a mean =1.6486. Institutional training and Mentoring both had a mean=1.6216 while job rotation was least with a mean =1.5135. This study finding further indicates that despite the fact that coaching was the most favoured method all other methods were also considered by GCL as methods which are suitable for training and development. This finding further indicates that OJT methods of training i.e. mentoring, coaching and job rotation are suitable methods of training for employees of GCL. This is supported by Bohlander and Snell (2010) who argue that OJT method of training is important when preparing new employees so that they can handle more challenging tasks in future. Since employees of GCL require hands-on training, this finding is an indication

that OJT should be evaluated and perfected since it is method of choice for most employees. The research therefore accepts the hypothesis that there is a relationship between methods of development and training and the performance of employee at the GCL.

4.7 Effects of Training and development on employee performance the GCL

This section is guided by the main objective i.e. to examine the effects of development and training on employee performance at GCL. The section was divided into two to capture both the employees' and the clients' perception.

4.7.1 Employee perception on the Effects of Training Development on employee performance at GCL

The respondents were required to indicate the extent to which training and development of employees at GCL lead to improved organizational performance. They were guided by the following scale i.e. 1=Very great extent, 2=Great extent, 3=Moderate extent, 4= Small extent and 5= No extent. Responses from employees are tabulated in Table 4.7:

Table 4.7: Effects of development and training on employee performance at the GCL

	N	Sum	Mean	Std. D
Ability to work with others	37	86.00	2.3243	1.81129
More commitment to one's work	37	75.00	2.0270	.79884
Improved handling of crime scenes	37	70.00	1.8919	.84274
Finding work more interesting	37	69.00	1.8649	.78748
Self-determination of laboratory staff	37	67.00	1.8108	.77595
Informed interpretation of laboratory results	37	67.00	1.8108	.93802
Ability to meet targets quarters and goals more easily	37	67.00	1.8108	.93802
Ability of employees to handle challenges assignments	37	66.00	1.7838	.67227
Improved quality of work	37	62.00	1.6757	.74737
Improve performance per employee	37	60.00	1.6216	.72078
Better understanding of one's job responsibility	37	58.00	1.5676	.80071
Increase knowledge and skill for one's job	37	57.00	1.5405	.73009

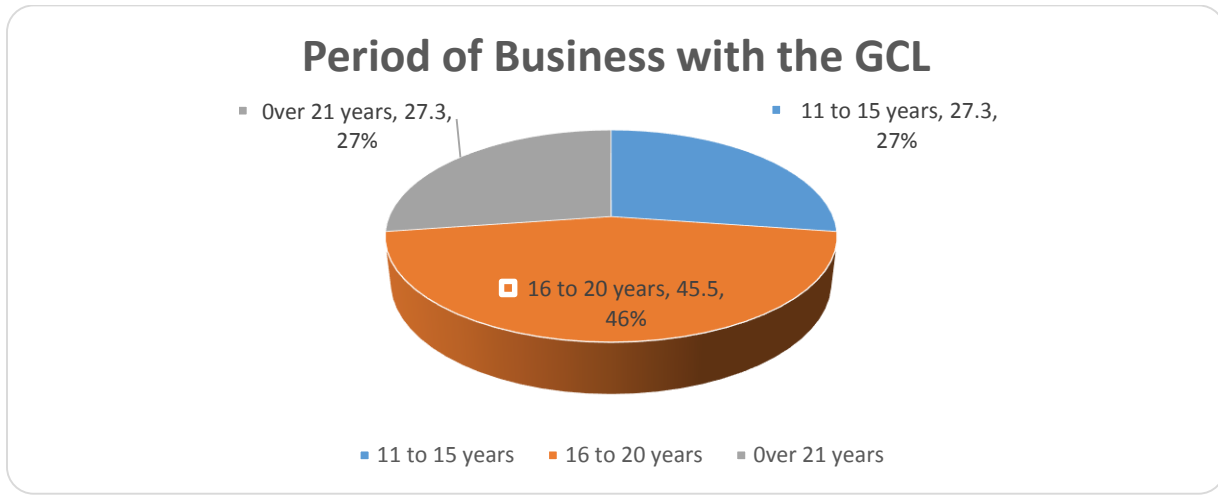
Source: Field data 2019

According to the study findings, the most profound effect of development and training of employees at GCL was their ability to work with others with a mean=2.3243; followed by more commitment to one's work; also to a moderate extent mean=2.0270. The next group of effects of employee development and training were all to a lesser extent namely improved handling of crime scenes; mean =1.8919 followed by finding work more interesting with mean=1.8649 and the next three variables were; self-determination of laboratory staff, informed interpretation of laboratory results and ability to meet targets quarters and goals more easily which tied up with mean=1.8108. The next effect of training and development on employee performance was ability of employees to handle challenging assignments with mean=1.7838 followed by improved quality of work with mean =1.6757 and improve of performance per employee with mean=1.6216; followed by better understanding of one's job responsibility=1.5676 and increase of knowledge and skill for one's job with mean=1.5405 coming last in the rankings but again looking at the harmonic mean of the variables this study concludes that the listed variables were all achievements associated with employee development and training at GCL although they were actually at the same level of important. These findings therefore conclude that effects of training and development were not exemplified on employee performance at the GCL but on overall organisational performance. The findings of the study support the involvement of managers in developing effective training programs for their employees so as to equip them with the desired skills, knowledge and abilities to achieve organizational goals as suggested by Farooq and Khan (2011). The findings also confirm that training and development not only improves the employee performance but also creates positive image of the organization (Jia-Fang et al, 2010).

4.7.2 Effects of Development and training on performance at the GCL: Clients' demographic

The demographic profile gave the characteristics of the clients who participated in the study. In total 11 clients were selected randomly in a period of one month. The respondents were required to indicate the number of years their organizations had dealt with GCL in the line of their duty. Figure 4.5 shows the number of years the various clients had sort for services from GCL in their line of duty.

Figure 4.5 Period of client’s business with the GCL



Source: Field data 2019

Results in the chart illustrate that the majority of the clients had dealt with the GCL for a period between 16 to 20 years (45.5%) while those who had dealt with it between 11 to 15 years were 27.3% similar to those who had dealt with the GCL for over 20 years. This means that the perceptions of the sampled clients can be highly considered since they had received services from the GCL for quite some time and hence were in a good position to comment regarding the quality of services.

4.7.2.1 Effects of Development and Training on Performance at the GCL: Clients’ Perception

In this section, the study aimed at determining the perception of clients as far as employee performance at GCL is concerned. The responses of the respondents were captured guided by the following scale; 1=Strongly disagree, 2= disagree, 3= Don’t know, 4= Agree and 5= Strongly agree.

The clients were required to rate positive and negative attributes of performance. The results are presented in Table 4.8;

Table 4.8 Effects of Development and Training on performance at the GCL: Clients' Perception

	N	Sum	Mean	Std.D.
Employees of GCL are very cooperative.	11	82.00	4.4545	.82020
Crime officers satisfied with forensic reports from GCL.	11	49.00	4.4545	.82020
Result analysis from GCL are reliable.	11	47.00	4.2727	.64667
GCL employees have skill to handle crime scenes.	11	43.00	3.9091	.83121
Lab staff at GCL offer informed interpretation of results.	11	40.00	3.6364	1.12006
Forensic scientists capable of generating scientific data.	11	37.00	3.3636	1.02691
GCL produces comprehensive analytical reports.	11	37.00	3.3636	1.28629
Exhibit mishandling is likely to occur in GCL.	11	35.00	3.1818	1.32802
Lab analyst biased when analyzing evidential material.	11	35.00	3.1818	1.16775
Analysis of crime scene/evidential take too long.	11	33.00	3.0000	1.54919
There are cases of evidence contamination at GCL.	11	29.00	2.6364	1.02691
GCL at times produce inconsistent results	11	29.00	2.6364	1.36182

Source: Field data 2019

As shown in Table 4.8, a majority of the respondents agreed that as a result of training and development employees were very cooperative and that Crime officers were satisfied with forensic reports from GCL both response had a mean of 4.4545. This was followed by those with the view that training and development had led to reliable result analysis with a mean of 4.2727. The other variables were viewed to also having contributed organizational performance with means as follows; acquisition of skills to handle crime scenes with a mean =3.9091, informed interpretation of results a mean =3.6364, generation of useful scientific data a mean =3.3636 and production of comprehensive analytical reports a mean =3.3636. Exhibit mishandling is likely to occur in GCL variable and Laboratory analyst likely to be biased when analysing evidential material variable tied with a mean =3.1818, analysis of crime scene/evidential material submitted in take too long a mean =3.0000, there have been cases of evidence contamination at GCL a mean =2.6364 and the least ranked was GCL at times produce inconsistent results a mean =2.6364. The study concluded

that overall the clients were overly satisfied with employee performance at the GCL implying that any training taken at the GCL had a positive effect on employee performance. The study therefore accepts the hypothesis that there is a significant relationship between employee development and training and performance at the GCL.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter consists of the summary, conclusions and recommendations of the study.

5.1 Summary

The main purpose of the study was to determine the effects of development and training on employee performance at the GCL. The study set out specifically to establish how training needs analysis affects employee performance at the GCL, to find out how the organization's training culture affects workers performance at the GCL and to determine how the training methods used at the GCL influence staff performance.

Data was collected using questionnaires which were dropped and pick by the researcher. A sample of 59 employees from the GCL, headquarters in Nairobi was used. 37 out of the 59 questionnaires were completed by the respondents and returned. This rate of return was 62.7%. In addition, the study collected data from 11 clients of the GCL.

In line with objective one which was to determine how training needs analysis affects employee performance at the GCL, the study findings revealed that there was no consensus as to the frequency of TNA with most of the respondents indicating that it was carried out every six months, an almost similar number indicated that it was done annually while some indicated that it was done on an ad hoc basis. The findings also indicated that to varying extents different types of TNAs were used at the GCL namely; performance analysis; organizational analysis; job analysis; and individual analysis. It was also established that individual employees played a key role in identifying their training needs although the HR manager and the line managers also played an equally important role in this regard. It was generally acknowledged that the GCL embraces TNA which enables the organization to meet its future training and development needs by guiding the design of relevant training programs.

The second objective was to assess how organizational development and training culture influences employee performance at the GCL. The study findings indicated that there are several factors which, to varying extents, hindered training and development at the GCL and thus affected organizational performance. The factors were identified in order of impact as follows: the non-

availability of expert trainers; the unwillingness of supervisors to release employees for training; lack of formal method of evaluating effectiveness of training; inadequate allocation of funds; lack of top management commitment to employee training and development; lack of employee participation in training and development policy; the unwillingness of potential trainees to undertake training; and employees lack of awareness of organizational training and development policy. It was also revealed that an organization's culture determines the type and level of training that an organization ultimately provides. An organization's management should provide a conducive learning environment by setting aside resources for training programs and encouraging the employees to take advantage of the provided opportunities.

In line with the third objective which was to determine how the training and development methods used at the GCL influence employee performance the findings established that the organization used various training methods. The different methods were rated in order of suitability as follows: rated most suitable was coaching followed workshops; institutional training and mentoring; job rotation was rated least suitable. Such methods include both on-the-job and off-the-job-training. Such methods are used in consideration of their advantages and disadvantages.

In line with the overall object, both the clients and employee agree that training and development of employees positively affects their performance. The client perception findings indicate that overall there is a positive relationship between development and training of employees and organizational performance at the GCL. In response to listed variables of training and development the respondents agreed, to varying extents that training and development led to improved organizational performance. A majority of over 90% of the clients agreed that as a result of training and development employees were very cooperative and that crime officers were satisfied with forensic reports from the GCL. This was followed by those with the view that training and development had led to reliable result analysis, enabled employees to acquire skills to handle crime scenes, enabled employees to give informed interpretation, led to the increased capability in the generation of useful scientific data and the production of comprehensive analytical reports. Other variables like reduced exhibit mishandling, reduced bias in lab analysis of evidential material, delays in the analysis of crime scene/evidential material, reduced cases of evidence contamination, submission of inconsistent results were perceived to have moderate influence.

5.2 Conclusions

The study concludes that training needs analysis affects employee performance at the GCL. Although there was no agreement on the frequency of the exercise of TNA the respondents agreed that TNA was carried out at the organization. This is in line with the literature which states that TNA should precede all training programs so as to establish existence of a performance gap and design a training program to address the gap. All training and development programs should be guided by TNA in order to effectively to address performance gaps. The findings also indicated that the organization uses different types training needs analysis such as performance analysis, organizational analysis, job analysis, and individual analysis. By using different types of TNAs an organization is able to assess more needs since the different methods complement each other and therefore where a training need has been overlooked by one analysis it may be identified by another. It can therefore be concluded that TNA affects employee performance because identifying training needs leads to the design and implementation of appropriate training and development programs at the GCL.

The study also concluded that for training and development to be effective at the GCL, the organization has to adopt a conducive learning culture which encourages training and development for all levels of staff. The study noted that although there was a high level of training and development, this was hindered by some factors. Such barriers include: the non-availability of expert trainers; the unwillingness of supervisors to release employees for training; lack of formal method of evaluating effectiveness of training; inadequate allocation of funds; lack of top management commitment to employee training and development; lack of employee participation in training and development policy; the unwillingness of potential trainees to undertake training; and employees lack of awareness of organizational training and development policy. As indicated by the literature effective training and development is a result of good planning and an organizational environment supported by conducive learning culture where most of the barriers to learning barriers have been eliminated or minimized. Therefore, to facilitate the function of training and development, the organization needs to find ways to eliminate or limit the identified barriers.

The findings indicate that the GCL uses a mixture of training methods both off-the job and on the job training methods. From the literature it is recommended that an organization should employ training methods according to the needs of the groups of employees that need to be trained. The

popular training and development methods used at the GCL include: coaching, workshops, institutional training, and mentoring and job rotation. The importance of paying attention to the different training methods is that each method has advantages and disadvantages. Therefore, the GCL should use methods that have most advantages for the organization and individual employees.

Overall the study concluded that there is a positive relationship between training and development of employees and employee performance at the GCL. This is supported by the findings of the study. The respondents, although to varying degrees, generally agreed that training and development led to high co-operation from employees, improved forensic reports, reliable result analysis, improved skills in handling crime scenes, informed interpretation of results; increased capability in the generation of useful scientific data and the production of comprehensive analytical reports, reduced exhibit mishandling, reduced bias in lab analysis of evidential material; faster analysis of crime scene/evidential material, reduced cases of evidence contamination, submission of inconsistent results. This is an indication of improvement of key areas of the employee performance which is consequently expected to lead to overall improved performance for the organization.

5.3 Recommendations

The study made recommendation both for practice and further research.

5.3.1 Recommendations for practice and policy

- i. From the findings, there is disparity in the responses on the frequency of TNA and this is an indication that the employees are not well informed about TNA or there is no training policy in place. TNA at the GCL should be streamlined so that training and development needs are systematically identified.
- ii. The results of the study also indicated that non availability of expert trainers is a barrier to employee development and training in GCL. In order to address this concern raised by the GCL employees, the leadership of GCL could occasionally attach its workers to institution which do similar work to theirs. The human resource department should identify all the competencies required by GCL employees and source for expert trainers who are required. List of expert trainers should be reviewed with change in analytical techniques.

- iii. The human resource manager in GCL should make arrangements such that more competent employees coach the less competent employees so as to raise the employee capabilities and potential since this is a cheaper way as compared to most training methods. GCL human resource manager should identify employees who have skills and knowledge in specific areas of concern to the institution and continuously arrange for training sessions so that the organization can have a pool of competencies in most areas of concern. Human resource department in GCL should ensure that the most effective training and development method is practiced and feedback programs developed to address emerging issues in relation to training.
- iv. The GCL should ensure a conducive learning environment by encouraging and sponsoring training of employees.
- v. The policy makers should develop policies which enable those employees who desire to enhance their skills and competencies do so with a lot of ease.

5.4 Areas for Further Studies

- i. Further research covering all categories of employees is required since organizational performance is determined by the performance of all employees.
- ii. Employees performance is affected by other factors apart from development and training hence a study to establish other factors affecting the performance of GCL is required.
- iii. Further research to determine the performance gap at the GCL is required. In case a performance gap is identified, the management can establish the factors contributing to the performance gap with a view of addressing those factors.
- iv. A wide range of expertise is required in GCL in order to meet the expectations of GCL clients. Further research to determine the specific skills which are required and to which extent ought to be carried out at GCL.

References

- Alan M. & Haccoun, R. (2011). *Managing Performance through Training and development*. (5th Edition). Ontario: Nelson Education Ltd.
- Armstrong M.(2000). “*Understanding training*’. *Human Resource Management Practice*. (8th Edition). London: Kogan Page Limited.
- Armstrong M. (2012). *Armstrong’s Handbook of Human Resource Management Practice*. (12th Edition). London: Kogan Page Limited.
- Batool & Batool (2012). *Effects of Employees Training on the Organizational Competitive advantage: Empirical study of Private Sector of Islamabad, Pakistan*. Journal of Psychology and Business.
- Bohlander G.W. & Snell S. (2010). *Managing Human Resource*. (15th Edition). Manson, USA: Cengage Learning.
- Bontis N., Dragonnetti N. C., Jacobsen K.W. & Roos G. (1999). *The Knowledge Toolbox: A review of the Tools Available to Measure and Manage Intangible Resources*. European Management Journal.
- Cascio, W. F. (1995). *Whither Industrial and Organisational Psychology’ in a Changing World of Work?* American Psychologist.50,928-939.
- Cole, G.A. (2002). *Personnel and Human Resource Management*, (5th Edition). Continuum London: York Publishers.
- Coetzee M. Jo-Anne B., Kiley J. Truman K. (Eds) 2007). *Practicing Education, Training and development in South African Organizations*”. South Africa: Juta and Company Limited
- Christiansen B., Sysoeva I, Udovikina A. & Ketova A. (2019). *Emerging Economic Models for Global Sustainability and Social Development*: Hershey, U.S.A.: Business Science Reference.
- Daniels A. 2000). *Bringing Out the Best in People: How to Apply the Astonishing Power of Positive Reinforcement*. New York: McGraw-Hill Companies.

- Dransfield R. (2000). *Human Resource Management*. Chicago, USA: Heinemann Educational Publishers.
- Farooq M. & Khan, M. A. (2011). *Impact of training and feedback on employee performance*. Far East Journal of Psychology and Business.
- Fletcher S.J. & Mullen C.A. (Eds) (2012). *The Sage handbook of mentoring and coaching in education*. New Delhi: Sage Publications Ltd.
- Garavan T.N., Costine P. & Heraty N. (1995). *Training and development in Ireland: Context, Policy & Practice*. Dublin 2: Oak Tree Press.
- Gilley J.W. Egglund S. & Gilley A.M. (2002). *Principles of Human Resource Development*. (2nd Edition). New York, U S A: Basic Books.
- Gilmore S. & Williams S. (2013). *Human Resource Management*. (2nd Edition) Great Clarendon Street, U.K.: Oxford University Press.
- G.O.K (2016). *Public Service Commission: Human Resource Policies and Procedures Manual for the Public Service*. Nairobi: Government Press.
- G.O.K (2015). *Human Resource development policy for the Public Service*, Nairobi: Government Press.
- G.O.K (2017). *Human Resource Strategy Framework for the Public Service*. Nairobi: Government Press.
- G.O.K (2017). *Guidelines on Managing Training in the Public Service*, Nairobi: Government Press.
- Greulich Peter E. (2012). *Tom Watson Sr. Essays on Leadership: Volume 1, Democracy in Business*. Austin, TX: MBI Concepts.
- Guest, D. E. (1997). *Human resource management and industrial relations*. Journal of Management Studies 24, 5, 503–521.

- Herzberg, F., Mausner, B. and Snyderman, B. (1959), *Motivation to Work*. New York: John Wiley and Sons Inc.
- Holbeche L. (2006) *Understanding change: Theory, Implementation and Success*. Roffey Park Management Institute: Butterworth-Heinemann.
- Hung, T. K. (2010). *An empirical study of the training evaluation decision-making model to measure training outcome*. Journal of Social Behavior and Personality. 38(1), 87-102.
- Jacobs R. L. (2003). *Structured On-the-Job Training: Unleashing Employee Expertise in the workplace*. (2nd Edition). San Francisco: Berrett-Koehler Publishers.
- Jagero N., Komba H. V. & Mlingi M. N. (2012). *Relationship between on the Job Training and Employee's Performance in Courier Companies in Dar es Salaam, Tanzania*. International Journal of Humanities & Social Science.
- Jia-Fang L. Tjosvold, D. & Shi, K. (2010). *Team Training in China: Testing and Applying The Theory Of Cooperation And Competition*. Journal Of Applied Social Psychology.
- Kamoche K., Debrah Y., Horwitz F. & Muuka G. (2004). *Managing Human Resource in Africa*. New York. Taylor & Francis Group.
- King K. & McGrath S. (2002). *Globalization, Enterprise and Knowledge: Education, Training And Development in Africa*. Wallingford UK: Symposium Series.
- Kirkpatrick D.L. (2006). *Improving employee performance through Appraisal and coaching* (2nd Edition). New York. American Management Association.
- Kraak A. (2004). *An Overview of South African Human Resource Development*. Cape Town. Human Sciences Research Council Press.
- Kreitner S. (1995). *The Good Manager Guide*, (1st Edition). London, Synene publishers.
- Krishnaveni R. (2008). *Human resource development: A researcher's perspective*. New Delhi: Anurag Jain.

- Lall M. & Sharma S. (2009). *Personal growth and training and development*. New Delhi: Anurag Jain.
- Landy F. W. (1985). *The psychology of work behavior (3rd Ed.)*. Homewood, IL: Dorsey Press.
- Landy F. J. & Conte J. M. (2010). *Work in the 21st century; An introduction to industrial and organizational psychology* ;(3rd Edition).Hong Kong, John-Wiley & Sons publishing Ltd.
- Lyster S. & Arthur A. (2007). *199 Pre-Written Employee Performance Appraisals: The Complete Guide to Successful Employee Evaluation and Documentation*. Florida: Atlantic Publishing Group.
- Marchington M. & Wilkinson A.(2002). *People management and development:Human resource management at work. (2nd Edition)*.London:Chartered Institute of Personnel Development.
- Mensah R. D. (2013). *Principles of human resource management*. USA: Xlibris Corporation.
- Mudor H. & Tooksoon P. (2011) *Conceptual framework on the relationship between human resource management practices, job satisfaction and turnover*. Journal of economics and behavioral Studies.
- Mugenda O. & Mugenda A. (2003). *Research methods. Quantitative and qualitative approaches*. Nairobi: African Centre for Technology Studies.
- Nagendra S. & Manjunath V. (2008). *Entrepreneurship and Management*. Bangalore: Sanguine Technical Publishers.
- Nonaka I. (1994). *A dynamic theory of organizational knowledge creation. Organization Science*.
- Pearn M. (2002). *Individual Differences and Development in Organizations*. Chichester: John Wiley & Sons.
- Pettigrew A.M. and Whipp R. (1991) *Managing Change for Competitive Success*. BasilBlackwell, Oxford. Krishnaveni R. (2008). *Human resource development: A researcher's perspective*. New Delhi: Anurag Jain.

- Philips J.J. (2003). *Return On Investment in training and performance improvement programmes*. (2nd Edition) Burlington, Butterworth - Heinemann.
- Prasad K. (2012). *Strategic Human Resource Development: Concepts and Practices*. New Delhi PHI Learning Private Limited.
- Ranganayakulu K.C.S. (2005). *Organizational Behavior*. New Delhi: Atlantic Publishers.
- Robinson D.G. and Robinson J. C. (1995). *Performance consulting: Moving beyond training*. San Francisco: Berrett-Koehler.
- Rothwell W. J., Gerity P. E., & Gaertner E.A. (Eds.). (2004). *Linking Training to performance: A guide for workforce Development professionals*. Washington D.C.: Community College Press.
- Rothwell W. J. & Kazanas H.C. (2003). *The strategic development of talent: A framework for using talent to support your organizational strategy (2nd Edition)*. Amherst. HRD Press.
- Saks M.A. & Haccoun R.R. (2011). *Managing Performance through Training and development*. (5th Edition). Ontario: Nelson Education Ltd.
- Simmonds D. (2003). *Designing and Delivering Training*. Camp Road, London: Chartered Institute of Personnel and Development.
- Sims R. R. (1998). *Re-inventing Training and development*. USA: Greenfield Publishing Group.
- Sims R. R. (2002). *Organizational Success through Effective Human Resource Management*. USA: Greenwood Publishing Group.
- Sims R.R. (2006). *Human Resource Development: Today and Tomorrow*. Greenwich: Information Age Publishing.
- Storey J., Wright P. and Ulrich D. (2009). *The Routledge Companion to Strategic Human Resource Management*. New York: Taylor & Francis Group.
- Swanson R. A. & Holton III E.F. (2009). *Foundations of Human Resource Development*. (2nd Edition). San Francisco: Berrett-Koehler.

Swartzlander A. (2004). *Serving Internal and External Customers*. New Jersey: Prentice Hall Publishers

United Nations Office on Drugs and Crime (2011). *Staff skill requirements and equipment recommendations for forensic science laboratories*. New York: United Nations.

Venugopa, P. (2009). *Sales and Distribution*. California; Sage publishers

Werner J.M. & Desimone R.L. (2012). *Human Resource Development*. (6th Edition). South-Western Cengage Learning: Erin Joyner.

Wentland D. M. (2007). *Strategic training: Putting Employees First*. Amherst Human Resource Development Press.

Williams R.S. (2002). *Managing employee performance: Design and implementation in organizations*. (2nd Edition). London: Thomson Learning.

Wilson J.P. (Ed.) (2005). *Human Resource Development: Learning & Training for individuals and organizations*. (2nd Edition). London: Kogan Page Limited.

www.opcw.org

APPENDICES

APPENDIX A

RESEARCH QUESTIONNAIRE

**EFFECTS OF TRAINING AND DEVELOPMENT ON EMPLOYEE PERFORMANCE:
A CASE STUDY OF GOVERNMENT CHEMIST LABORATORY (GCL) IN KENYA**

This questionnaire is made of two sections i.e. sections A and B.

SECTION A: RESPONDENT BIODATA

Kindly tick in the spaces provided

QUESTION	ANSWER
Name of organization	
How long have you worked in GCL?	Less than 5years [] 6 to 10 years [] 11 to 15years [] 16 to 20 years [] over21 years []
Position/Title of respondent	
Your highest level of education	1) Secondary level [] 2) Diploma [] 3) Bachelor's Degree [] 3) Master's Degree [] 4) PhD [] 5) Other (please specify) []
Age	Less than 20 years [] 21 to 30 years [] 31 to 40 years [] 41 to 50 years []

	51 to 60 years[]
	over 61 years []

SECTION B

OBJECTIVE ONE

To establish how training and development needs are determined at GCL

Question 1

Using the scale provided please indicate the frequency to which Training needs analysis at GCL is carried out.

**Use the following Key: 1= Very great extent, 2= great extent, 3=Moderate extent
4= Small extent and 5= No extent**

NO.	Frequency	1	2	3	4	5
1.	Every six months					
2.	Annually					
3.	Adhoc					

Question II

Using the scale provided please indicate the extent to which the listed processes are used to identify employee training and development needs at GCL.

Use the following Key: 1= Very great extent, 2= great extent, 3=Moderate extent 4= Small extent and 5= No extent

NO.	List of Processes	1	2	3	4	5

1	Performance analysis					
2	Organizational analysis					
3	Job analysis					
4	Individual request					

Question III

Using the scale provided please indicate the extent to which the listed group of employees are involved in the training needs analysis at GCL.

Use the following Key: 1= Very great extent, 2= great extent, 3=Moderate extent 4= Small extent and 5= No extent

No.	Employee(s)	1	2	3	4	5
1	Individual employee					
2	The laboratory manager					
3	Human Resource department					

Question IV

Using the scale provided please indicate the extent to which you agree or disagree about training needs analysis at GCL.

Use the following Key: 1= Strongly Agree, 2=Agree, 3= I don't know,

4=Disagree, 5= Strongly Disagree

		1	2	3	4	5
1	The current training needs analysis process in GCL will meet future training and development needs of the institution.					
2	The process used to identify employee training and professional/development needs at GCL is very effective					
3	Employees at GCL receive trainings which are relevant to their job descriptions.					
4	Training and development programs at GCL are always based on training needs assessment					

OBJECTIVE II

To determine how organizational training and development culture influences employee performance

Using the scale provided please indicate the extent to which you agree or disagree the following factors are barriers to training and development at GCL.

Use the following Key: 1= Strongly Agree, 2=Agree, 3= I don't know,

4=Disagree, 5= Strongly Disagree

Factors		1	2	3	4	5
1	Lack of top management commitment to the employee training and development.					
2	Inadequate allocation of funds for training and development of the employees.					

3	Employee's lack of awareness of the organization's training and development policy.					
4	Lack of employee participation in the development of the training policy.					
5	Unwillingness of potential trainees to undertake training.					
6	Unwillingness of supervisors to release employees for training.					
7	Non-availability of expert trainers in the required field of training.					
8	No formal methods of evaluating the effectiveness of training imparted.					

Objective III

Find ways to improve training and development at GCL

Question I

Using the scale provided kindly indicate to which extent the following actions can be used to improve training and development at GCL

Use the following Key: 1= Very great extent, 2= great extent, 3=Moderate extent
4= Small extent and 5= No extent

NO.	Suggestions	1	2	3	4	5
1.	Top management of GCL should ensure effective formulation and the implementation of the training policy					
2.	Training and development of employees should be a continuous process.					
3.	It is important to have opportunities for training and/or development at work					

Question II

To what extent do you agree or disagree that the following methods are suitable for training and developing employees at GCL.

**Use the following Key: 1= Strongly Agree, 2=Agree, 3= I don't know,
4=Disagree, 5= Strongly Disagree**

	Training Methods	1	2	3	4	5
1	Institutional training					
2	Workshops					
3	Coaching					
4	Mentoring					
5	Job rotation					

MAIN OBJECTIVE

Assess whether employee training and development enables GCL meet their job performance requirements and standards.

Question I

To what extent does training and development of employees at GCL lead to the following?

(Use the following Key: 1= Very great extent, 2= great extent, 3=Moderate extent 4= Small extent and 5= No extent)

Training and development outcomes		1	2	3	4	5
1	Better understanding of one's job responsibility					
2	Increased knowledge and skills for one's job					
4	Improved performance by employees					
5	Improved quality of work					
6	Ability to meet target quotas and goals more easily					
7	Ability to work with others					
8	More committed to one's work					
9	Training I find my work more interesting					
10	Improved handling of crime scenes.					
11	Informed interpretation of laboratory results					
12	Self- self-determination of the laboratory staff					
13	Ability of employees to handle challenging assignments.					

QUESTIONNAIRE FOR CLIENTS

This questionnaire is made of two sections i.e. sections A and B.

SECTION A

Respondents Bio data

1. Please indicate your job title

Title: _____

2. Please indicate the name of your organization

Name of Organization: _____

3. How long have dealt with the Government Chemist Laboratories (GCL) in your line of duty?

_____ Years

_____ Months

_____ Others (specify)

SECTION B

Using the scale provided please indicate to what extent do you agree or disagree with the following statements.

Use the following key: 1= **strongly disagree** 2= **Disagree** 3= **I don't know** 4= **Agree**
5= **Strongly Agree**

Instruction: Kindly Tick the correct response to each question						
Questions		1	2	3	4	5
1	Employees of GCL who accompany crime investigating officers during crime scenes handling have the skills required to handle the crime scene.					
2	Crime investigating officers are satisfied with the quality of forensic reports from GCL.					
4	Results of analysis from GCL are reliable.					
5	Employees of GCL are very cooperative.					
6	GCL produce comprehensive analytical reports.					
7	Laboratory analysts in GCL are usually biased when analyzing evidential materials.					
8	There have been cases of evidence contamination at GCL					
9	Exhibit mishandling is likely to occur in GCL.					
10	Analysis of crime scene /evidential material submitted in GCL take too long.					
11	The forensic scientists in GCL are capable of generating useful scientific data.					
12	GCL at time produce inconsistent results of analysis.					
13	The laboratory staff at GCL offer informed interpretation of laboratory results.					

APPENDIX B

TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size

"S" is sample size.

Krejcie, Morgan, (1970) Pp104-106