# FACTORS AFFECTING TRANSFER OF TRAINING WITHIN MILITARY OFFICERS' TRAINING IN THE MINISTRY OF STATE FOR DEFENCE, KENYA

**BY**

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## DECLARATION

I declare that this is my original work and has not been presented for a degree in any other university for academic purpose or for any other award.

Sign: ..... Date: 14/5/13

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This project has been submitted for examination with my approval as university supervisor for and on behalf of Kenyatta University.

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## DEDICATION

To my mum Margaret, wife Irene, Sons Davian and Bramon, Sister Esther and Brother Vincent for being pillars of all my efforts and especially understanding that I needed some peace of mind while undertaking the course.

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I am grateful to the Almighty God for granting me energy to undertake this course. I would like to pass my sincere gratitude to my friends and family for their moral support and encouragement. My deep felt gratitude also goes to my supervisor Muathe S M A (PhD) for his invaluable guidance, suggestions, patience, and prompt feedback that contributed to the success of this study.

To all staff and management of the Ministry of State for Defence for their support and agreement to participate in the study.

God bless you all.

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## ABSTRACT

A common experience is that learning from a formal training program is not carried back for application on the job. After that kind of training it's important to assess whether transfer of training has taken place during the use of actual aspects and accessories and equipment. The purpose of the study was to find out the factors affecting transfer of training within military officers' in the Ministry of State for Defence, Kenya. A descriptive research design was used this study. The target population of this study composed of 286 military officers trained staff at the Army headquarters and trainers. This research study used a stratified random sampling method to select 30% of the respondents. The researcher therefore selected 86 respondents from the military institutions. The researcher used primary data for this study and was collected using questionnaires. The questionnaire was administered using a drop and pick later method to the sampled respondents. The questionnaire designed by the researcher based on the research questions. The quantitative data in this research was analyzed by descriptive statistics using statistical package for social sciences (SPSS) version 21. Content analysis was used in processing the qualitative data and results presented in prose form. In addition, a multivariate regression model was applied to determine the relative importance of each of the four variables with respect to transfer of training. Data was presented in tables and figures. The study found that trainer characteristics had the greatest effect on transfer of training followed by training design, then trainee characteristics while the environment had the least effect. The study found that self-efficacy and career and job attitudes affected transfer of training to a very great extent. In addition, the continuous learning culture, social support/ workgroup support, opportunity to perform and situational cues and consequences affected transfer of training to a great extent. Moreover, ambient conditions (sound, light, temperature, air) and student involvement affected transfer of training to a great extent. The study found that provision of additional or supportive guidance on using the skills back on the job, training content and guidelines for effective training affected transfer of training to a very great extent. The study found that knowledge of the subject matter and professional experience affected transfer of training to a very great extent. The study concludes that trainee characteristics such as personality, trainee ability, and motivation effects were originally identified by training practitioners as factors affecting transfer of training. How much the trainee was liked and the perceived potential for the trainee and workgroup support are important in establishing how much of an opportunity the trainee had to perform trained tasks on the job. High levels of training fulfillment were associated with increased training motivation, self-efficacy and organizational commitment, their training fulfillment measure incorporating expectations of content, perceptions of actual content and desired content. With over learning, practice training in a skill continues beyond the point of skill mastery. Trainers stick closely to the instructional material through careful focus on instructional objectives and few used interesting material to spice up. The study recommends the trainees the trainees need to have high level of confidence so as to attain anticipated performance. The organization need to encourage trainees to update the technical knowledge and skills and personal growth. Supervisors and peers should provide trainees with opportunities for practicing new skills and knowledge in the job setting. Unlimited practice opportunities need to be provided to trainees. Cultural commitment to learning should be encouraged in the organization. Trainers need to use interesting material to spice up their teaching.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the Study

Training involves acquisition of skills through the process of teaching or learning a skill or job. It also involves improving of fitness that is the process of improving physical fitness by exercise and diet. Training is any learning activity which is directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task. This implies that the focus of training is the job or task that is to be performed by the individual who is being trained (Cole, 2002). For example, new equipment may require workers to learn new ways of doing the job or a worker may have a deficient understanding of a work process. In both sides, training can be used to correct the skill deficit. Training is focus on the current job, the scope of training is on individual employees (Robert, 2010). It is also job specific and addresses particular performance deficits or problems. Training tends to focus on immediate organizational needs and fairly quick improvement in workers' performance. It strongly influences present performance levels. A fundamental objective of training is the elimination or improvement of performance problems.

To be successful, a training program must have clear stated and realistic goals (David, 2010).These goals will guide the program's content and determine the criteria by which its effectiveness will be judged. For example, management cannot easily realistically expect that one training session will make everyone an accounting expert. Such an expectation guarantees failure because the goal is unattainable. If the goal is to improve specific skills, the training needs to be targeted to those skill areas. In contrast, the company's training goal may be to provide employees with a broader understanding of the organization (Luis, 2010).

Organizations can no longer afford to provide training that has not been evaluated for its contribution to the organization's strategic goals and mission and its effectiveness and use on the job to achieve those goals (Brinkerhoff, 2005). Effectiveness goes to the heart of what training and development are all about in an organization: giving employees the knowledge and skills they need to perform their jobs effectively (Noe & Schmitt, 1986).

In order to initiate more effective training, organizations need to look at how the training and development system is aligned with the strategy of the organization and at what is being done to make sure that all training and development activities are effective. Moreover, the government spends enormous amount of money on employees in the public sector and more expenses will be incurred by the government in training its public sector employees in order to achieve a knowledge-based workforce and knowledge-economy. Training Effectiveness is defined as a measurement of observable changes in knowledge, skills, and attitude after training has been conducted (Bramley, 1996). Alvarez, Salas, and Garafano (2004) defined training effectiveness as the variables that are likely to influence the outcomes of the training at different stages of the training process. For the purpose of this research, the definition provided by Bramley (1996) will be adopted since the measurement of changes in knowledge, skills and attitude upon completion of the training is important aspect in transfer of training.

Public sector/service may be defined as the part of the economy concerned with providing basic government services. The composition of the public sector varies by country, but in most countries the public sector includes such services as the police, military, public roads, public transit, primary education and healthcare for the poor. The public sector might provide services that non-payer cannot be excluded from (such as street lighting), services which benefit all of society rather than just the individual who uses the service (such as public education), and services that encourage equal opportunity. From the definition, it is worth noting that this sector

plays a very important role since it is tasked with the duty of providing public services to all citizens of a particular country.

### 1.1.1 Military officers training in the Ministry of State for Defence

The purpose of training in the Kenya Defence Forces (KDF) is to equip officers, men and women with necessary professional knowledge and develop skills to enable them undertake their core mission effectively. Training is based on set standards and objectives with an integral evaluation system founded on a well-designed doctrine. Training creates desired loyalty, inculcates team spirit, nurtures discipline, and builds physical and mental fitness. The dynamism in warfare brought about by the ever-changing technology has necessitated constant change in training doctrine to conform to the present times. The KDF adopted the maneuver approach to warfare as the doctrine in 2001. This doctrine seeks to enhance the KDF capacity to shatter the enemy cohesion and fight using minimum resources.

Training is executed in three distinct phases namely individual, collective and institutional by deliberate exploitation of opportunities offered by Kenya schools and colleges for professional development and proficiency. Occasional overseas and allied training provides specialized knowledge in certain areas while promoting bilateral co-operation. Training in the KDF is based on a 3-year training cycle as enshrined in the Ministry of State for Defence (MOSD) training directive that outlines the guidance on priorities and emphasis on training. The continuum flows through five levels; individual, teams, sub-units, units and formations. In every third year of training cycle, the ministry may schedule joint/combined exercises with friendly nations to review the position of the troops. Some of the exercises may include peace support operations (PSOs) involving the East African states.

## 1.2 Statement of the Problem

It is impossible to ignore issues that relate to effectiveness of any training program and transfer of training for any organisation since a huge fraction of the budgets is provided for staff training. On the same breadth ministries also use a substantial amount of their allocated funds on training which calls for a deeper understanding whether the funds utilized towards that end are commensurate with the output of the trained personnel or provide the desired end state. A common experience is that learning from a formal training program is not carried back for application on the job. The estimates are that only about ten percent of training is effectively transferred to the workplace (Detterman, 2003) while Fuller *et al.* (2004) estimate that somewhat less than twenty percent of training investments lead to some organizational benefit. Other literature indicates that in the short term only 50% of training transfers to the job, and in the longer term, only 10% will ultimately transfer (Kim & Lee, 2001).

Training being a strategic component for any military, everything possible should be undertaken to ensure that the desired level of whatever that has been learnt by the officers is applied in the field. At times the kind of training that is provided involves processes or actions that are irreversible which calls for certainty in decisions that are to be made based on the skills that have been learnt. The training component in the set up requires a lot of funds occasioned by the kind of equipment, time and other accessories that are expensive. Despite the utilization of the said funds for training some lack of transfer has been observed in the field while applying what has already been learnt. After any kind of training it's important to assess whether transfer of training has taken place during the use of actual aspects and accessories and equipment. The factors reviewed in the past studies as the ones affecting transfer of training may not be universally applicable. At the same time they appear to apply in western countries which may not

be the case in Kenya. This calls for a study to establish factors that affect transfer of training within military officers' training in the Ministry of State for Defence, Kenya.

## 1.3 Objectives of the Study

### 1.3.1 General Objective

The general objective of the study was to find out the factors affecting transfer of training within military officers' training in the Ministry of State for Defence (MOSD).

### 1.3.2 Specific Objectives

The study however sought specifically to:-

(i) Determine whether trainee characteristics affect transfer of training for military officers' in the Ministry of State for Defence.

(ii) Find out the effect of environment on staff's transfer of training in the Ministry of State for Defence.

(iii) Establish the extent that training design affect transfer of training in the Ministry of State for Defence.

(iv) Establish the effect of trainer characteristics on transfer of training in the Ministry of State for Defence.

## 1.4 Research Questions

The study sought to answer the following research questions:

(i) To what extent do individual trainee characteristics affect the extent of training transfer in the Ministry of State for Defence?

(ii) How does the environment affect transfer of training in the Ministry of State for Defence?

(iii) To what extent does training design affect transfer of training in the Ministry of State for Defence?

(iv) What is the effect of trainer characteristics on transfer of training in the Ministry of State for Defence?

**1.5 Significance of the Study**

Evaluation of training programs plays a key role in determining their effectiveness for the organization. While research continues to develop alternative ways to measure training effectiveness, some have proposed that measuring training effectiveness alone does not capture all the important information in the training process since typically only 10% of organizational expenditures result in actual transfer of trained skills back to the job (Georgenson, 2002). Training effectiveness and training transfer are linked in literature and both play vital roles in organizational training success. More specifically, there are factors that affect the abilities of employees to transfer trained skills from the classroom to their work environment. The findings of the study would be of significance to the following:-

The study would provide information to the public sector's training institution about employees' perception on training which would allow management to capitalize organization strategy in order to deal with elements of the job that contribute to transfer of training. The investigation of the factors affecting transfer of training would enhance managements understanding so that they can provide conducive environment to both the trainers and trainees.

Researchers would gain theoretical and practical experience on the factors affecting transfer of training hence enable the researcher to make recommendations on enhanced performance of staff

and also to indicate various areas in training that needs to be addressed and studied further by future researchers.

### 1.6 Delimitations/Scope of the Study

The study is investigating the factors affecting transfer of training within military officers' training. The study focused more on factors affecting transfer of training within military officers' training in the Ministry of State for Defence, Kenya. The researcher believed that this provided an adequate population and sample for the study and therefore give reliable results and findings. The research study was undertaken at the military institutions between the months of November/December 2012 and January-April 2013.

### 1.7 Limitations of the study

Ministry of State for Defence being a ministry with training institutions and establishments scattered around the country and even including remote locations, substantial amount of finance may be required to conduct the study. However the researcher trained and employed assistant researchers as well as drew a representative sample that is acceptable and manageable within the time given and finances available.

Although some information about training may be classified and access to it being limited thus making it a limitation for the research, the researcher endeavoured to use formal channels that are in existence to get the kind of information that is useful for the research.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

The chapter deals with the review of the existing literature on factors affecting transfer of training. The literature reviewed was intensively done to appreciate the related works done by others and also identify knowledge gaps that need to be filled by this study. It was organized thematically based on the research objectives and was also meant to shape the research and help conceptualizing the concept.

## 2.2 Theoretical Review

### 2.2.1 Theory of Planned Behaviour

The scientific bases of transfer of training studies originated in planned behaviour theory whose origins were in the field of social psychology as a predictor for behaviour. This theory predicts that the most important determinant of a person's behavior is behavioral intent. The individual's intention to perform a behavior is a combination of his or her attitude toward performing the behavior, the prevailing subjective norms and the perceived behavioral controls on the individual (Brainmarket, 2002).

The theory provided a model for viewing forces arrayed for and against an initiative that would cause significant change. Brainmarket (2002) implied that it is almost mathematical, in that the sum of the vectors (for and against) will determine the outcome. This complexity of causation in terms of the number of variables-both inhibitors and facilitators-makes transfer a difficult problem to conceptualize and, therefore, address. In other words, if one could solve the transfer

problem, a majority of organizational problems would be minimized or cease to exist. Several models have been developed to try to understand the transfer phenomena.

### 2.2.2 Adult Learning Theory

At the centre of adult learning theory is an andragogical (adult learning) model of education, originating from comparisons with the more traditional pedagogical (child learning) model. The andragogical model looks at the core principles underlying why and how adults learn.

The most well known and referenced is by Knowles (2005), who presents six main assumptions or principles of adult learning: adults need to know why they need to learn something, before undertaking to learn it. They will invest energy into exploring the potential benefits of learning, and consequences of not learning. Adults have a self concept of being responsible for their own decisions, for their own lives. They like to direct their own learning (to different levels) and resent having the will of others imposed upon them. Adults come to an educational activity with a depth and variety of experiences, and it is important to acknowledge and build on these experiences. Adults become ready to learn those things they need to know to cope effectively with real life situations. This is important when considering such things as timing and promotion of learning opportunities. The most potent motivators for adults to learn are internal factors, rather than external.

The cycle then continues into a new and improved action or experience, based on the improved planning. This cycle or similar was also briefly referred to in the psychological literature, in the context of sequencing training design for greatest effectiveness. Personal experience, and evidence from trainee evaluations over many years, has convinced the author that incorporating adult learning principles and the learning cycle (with associated learning styles) into training

design, results in training outcomes being achieved well hence making the theory important for the study.

### 2.2.3 Human Capital Theory

Human capital theory as formalized by Becker and Gerhart (2006) is the dominant perspective on on-the-job training. This theory views training as an investment; it raises expected future productivity but at a cost. The key distinguishing feature of a human capital investment as opposed to an investment in capital concerns property rights. A machine can be sold, but in modern society, men cannot. As individuals have the discretion over the deployment of their own human capital, workers and firms will need to agree on an exchange in the labour market. This implies that how the costs and returns to training are shared between workers and firms is a central concern in the on-the-job training literature. Human capital theory has been further developed in the 1970s to explain the life-cycle pattern of earnings. This literature analyses the human capital investment decision of individuals in a competitive environment. One may argue that, in this model, the distinction between education and training is an artificial one. Workers choose the investment as a function of prices (and ability). Through these prices, the demand side enters. There is no strategic interaction between workers and firms. Weiss (1995) surveys this literature.

The first major attempt to apply learning theory to educational technology was Skinner's development of teaching machines, (Skinner, 1968). His idea was to develop curricula at such a level of detail that a learner could learn without error. The learner, his theory held, never fully recovers from making errors; once made, there remains a possibility that they will recur to disrupt future learning and performance.

Consequently, effective instruction should invoke only correct responses. He was critical of traditional teaching methods because they often engender errors in learning, and because they fail to reinforce behaviour effectively. On his theory, negative reinforcement (e.g. criticism, punishment) was to be avoided. Only positive reinforcement is theoretically sound, and this must be administrated according to specific schedules to ensure effective learning. For instance, as new responses are shaped up, reinforcement should be withdrawn. Mechanical presentation of the curriculum seemed an ideal way for teaching since a perfect schedule of shaping and reinforcement could be built into the teaching programme.

The nature of production systems is conceptually simple. A production is a rule which specifies that if certain conditions are encountered in a situation then specific actions are performed. For example, if it is not a working day and all the household chores have been done and the weather forecast is good then decide to go walking. These actions modify the state of the situation, creating new conditions which may fire another production.

### 2.2.4 Reinforcement Theory

This theory was developed by the behaviorist school of psychology, notably by Skinner (1968). Skinner believed that behaviour is a function of its consequences. The learner will repeat the desired behaviour if positive reinforcement (a pleasant consequence) follows the behaviour.

Positive reinforcement, or 'rewards' can include verbal reinforcement such as 'That's great' or 'You're certainly on the right track' through to more tangible rewards such as a certificate at the end of the course or promotion to a higher level in an organisation. Negative reinforcement also strengthens a behavior and refers to a situation when a negative condition is stopped or avoided as a consequence of the behaviour. Punishment, on the other hand, weakens a behaviour because a negative condition is introduced or experienced as a consequence of the behaviour and teaches

the individual not to repeat the behavior which was negatively reinforced. Punishment creates a set of conditions which are designed to eliminate behaviour (Maund, 2010). Katou (2009) considers this aspect of behaviorism has little or no relevance to education. However, Burns says that punishment is widely used in everyday life although it only works for a short time and often only when the punishing agency is present. Burns notes that much Competency Based Training is based on this theory, and although it is useful in learning repetitive tasks like multiplication tables and those work skills that require a great deal of practice, higher order learning is not involved. The criticism of this approach is that it is rigid and mechanical.

### 2.2.5 General Training Overview

Training programs in organizations provide a variety of benefits. For example, organizations gain through the improved performance and increased productivity that accompany employee development, while employees enjoy extrinsic and intrinsic rewards associated with skill development and performance improvement. Cole (2002) defines training as any learning activity which is directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task. This implies that the focus of training is the job or task that is to be performed by the individual who is being trained. It is also defined as a process of teaching, new employees the basic skills they need to perform their jobs (Dessler, 2009).

Training is a powerful agent for facilitating an organization's expansion, development of capabilities and improvement of profitability. A well educated and well trained workforce is essential in maintaining an organization's competitive advantage. This was affirmed by Noe (2002) that training is increasingly being called upon to serve as the catalysts to drive change and to assist an organization achieve its stated strategic objectives. Thus training is critical to organization's performance and success.

Amstrong (2001) emphasizes that training should be systematic in that it is specifically designed, planned and implemented to meet defined needs. It is provided by people who know how to train and the impact of training is carefully evaluated. The systematic training involves identification of learning needs, planning training programmes, implementing the training and lastly evaluating the training.

### 2.2.6 Concept of Transfer of Training

Transfer of training has been defined as the generalization of the skills acquired during the training phase to the work environment and the maintenance of these acquired skills over time (Baldwin and Ford, 1988). Positive transfer of training represents the extent to which trainees apply the knowledge, skills, and attitudes gained in the training context to the job (Wexley and Latham, 1981). If employees do not effectively transfer the trained skills to the job-site, then clearly, neither the employee nor the organization profits from the training. Therefore, the effectiveness of transfer of training plays a major role in determining the utility of training and development programs in organizations. The proper application of skills leant by military officers is crucial since a number of issues that they handle need careful judgment and execution because once it's done then it cannot be reversed. Organizations can no longer afford to provide training that has not been evaluated for its contribution to the organization's strategic goals and mission and its effectiveness and use on the job to achieve those goals (Brinkerhoff, 2005).

Training transfer generally refers to the use of trained knowledge and skills back on the job. Baldwin & Magjuka (1988) mentioned that for transfer to occur, "learned behavior must be generalized to the job context and maintained over a period of time on the job". Meanwhile, Saks & Haccoun (2007) views training transfer is the generalization of knowledge and skills learned in training on the job and the maintenance of acquired knowledge and skills over time.

A framework useful for understanding the measurement issues relating to the transfer of training is Kirkpatrick's (1994) four-level model of training evaluation. He identified four distinct criteria for training program evaluation: immediate post-program participant *reactions* to the event; the amount of *learning* that resulted; the extent to which *behaviors* learned in the training transfer to the job; and organizational *results* achieved. He posited that the four levels were causally linked.

## 2.3 Empirical Review

### 2.3.1 Individual Characteristics

Numerous studies have found individual trainee differences can determine the amount of information learned during training, and transferred to the job. These effects have been shown to be independent from training design factors (Fleishman and Mumford 2009). Trainee characteristics such as personality, trainee ability, and motivation effects were originally identified by training practitioners as factors affecting transfer of training (Baldwin and Ford, 1988). Notwistanding, further empirical testing of these characteristics was very rare in earlier transfer studies.

Among various personality variables, locus of control was hypothesized in many earlier studies to affect the transfer process (example by Noe and Schmitt, 1986). Locus of control is defined by Rotter (1966) as a generalized expectancy that organizational outcomes in terms of rewards and reinforcements in life are controlled either by an individual's own actions (internality) or by other forces (externality). In a training situation, trainees with strong belief that they can control the provision of organizational outcomes are more likely to facilitate application of training content on their jobs. Such outcomes can be recognition, promotions, salary increase and job enlargement. Studies of Tziner *et al* (1991) indicate that those with an internal locus of control

who benefited from a relapse prevention module exhibited higher levels of mastering the training contents. They were more likely to use trained skills and transfer strategies and were shown to transfer those trained skills to the workplace.

Self-efficacy plays a role in the transfer of training. Bandura (1986) defines self-efficacy as "peoples judgments of their capabilities to organize and execute courses of action required to attain designated types of performances". It is clear that trainees with a high level of confidence in attaining anticipated performance and behavior change will be more likely to apply what they have learned from training on the jobs. . It is well established that self-efficacy enhances learning outcomes and performance, whether an individual has it already, or acquires it during training. The implications for transfer outcomes are summarized by Bramley(2006). He explains that individuals who are low in self-efficacy have difficulty coping with environmental demands. They imagine potential difficulties are more formidable than is actually the case, and dwell on personal deficiencies. People who are strong in self-efficacy focus on the demands of a situation, and treat obstacles as challenges.

Bramley goes on to offer strategies to help increase self-efficacy. As much of the issue is about being able to predict and manage perceived threats, learning skills to master the situation that feels threatening, and practicing these in a safe environment helps to improve self-efficacy. It is also useful during training to provide a wide range of experiences on what is being learned, so learning can be applied to situations that don't quite fit. Self-efficacy increases when experience fails to support fears, so interspersing training with job experience, and setting up systems to ensure support and reward for application are both beneficial interventions. Part of the support system should be supervisor's involvement and understanding, with goals and specific measures of progress set. Feedback systems are also important.

Motivation plays an important role in training since individuals with inadequate motivation are likely to be poor in mastering the training content and subsequent training performance. Motivational variables can be grouped into: career and job attitudes, organizational commitment, decision and reaction to training and post training interventions. Mumford *et al* (2009) revealed trainee characteristics such as aptitude and motivational levels were among the most consistent predictors of trainee performance, stronger even than course content variables. Recently, several studies have confirmed that trainee's motivation to attend training and to learn, affects their level of skill acquisition, retention, and willingness to transfer learning to the workplace (Martocchio and Webster 2008, Mathieu *et al* 2010).

Career and job attitudes generally refer to the cognitive state of psychological identification with one's career and job. Trainees who frequently engage in cognitive or environmental search activities are expected to have better understanding of their strengths, weaknesses and interests (Noe, 1986; Noe and Schmitt,1986). In fact, they recognize the importance of learning new skills and refining current skills (Facteau *et al,*1995).

According to Porter *et al.*(1974) defines organizational commitment as "the relative strength of an individual's identification with and involvement in a particular organization". These represents the extent of an individual's belief in and acceptance of organizational goals and value, willingness to exert considerable work effort and desire to maintain organizational membership (Mowday *et al.*,1982). Thus trainees with a high level of organizational commitment were optimistic to perceive the likelihood of positive organizational change.

Cognitive ability relates directly to general intelligence. Generally, the higher an individual's cognitive ability, the more successful they will be in learning and training. They have higher self-efficacy and higher performance and skill acquisition. Salas and Cannon-Bowers (2001)

raise the caution that high training performance does not necessarily transfer to better performance on the job. Other factors such as motivation to apply, and actual job requirements will also affect transfer outcomes.

Employees who are provided with opportunities to provide input into the training decision are more likely to perceive the training as useful for their jobs which, in turn, resulted in higher levels of pretraining motivation (Baldwin *et al.*,1991). Trainees who perceived training as having high job and career utility were more likely to be motivated to learn (Clark *et al.*,1993) and those who perceived training to be relevant had higher level of immediate skill transfer(Axtell *et al.*,1997).

Post training interventions such as feedback and relapse prevention might influence trainee's motivation to transfer new acquired skills and knowledge back to their jobs. A study by Martocchio and Webster (1992) indicated that trainees receiving negative feedback resulted in less learning over time than those receiving positive feedback.

Dweck and Leggett (2008) discuss two classes of goal orientation: Mastery (or learning) goal orientation', where individuals seek to develop competence by acquiring new skills and mastering novel situations and 'Performance goal orientation', where individuals pursue assurances of their own competence by seeking good performance evaluations and avoiding negative ones. Mastery goal orientation is positively related to self-efficacy (Phillips and Gully, 2007), and to metacognitive activity in training.

### 2.3.2 The Environment

Even if the durability and flexibility of original learning were strong, there may be conditions back at the worksite that mitigate against transfer. Trainees will also have some understanding

about the general extent to which factors in the workplace support employee training. These general perceptions of workplace support are referred to as the transfer climate. Although practitioners stress the importance of the work environment in creating positive transfer, empirical research focusing on this dimension is limited (Baldwin and Ford, 1988). Recent studies have been based on such work environment variables as support-in-organization, continuous learning culture and task constraints (Tracey *et al.*,1995).

Ford *et al.* (2008) studied how the "opportunity to perform" trained tasks back on the job affected training transfer. In effect, Ford postulated a training application structure on the job. That structure can be characterized in three ways: first, in terms of its breadth (how many tasks on the job are covered by the training); second, its activity level (the number of times trained tasks are actually done on the job); and third, task complexity (from simple to complex). This application structure is in turn dependent upon the department in which the task occurs and by the work context (how much the supervisor likes the trainee, the amount of workgroup support and the pace of the workflow). Ford studied Air Force maintenance airmen in an 18-week technical training program, finding that airmen returned to a training application structure that varied in terms of breadth, activity level and type of task. For example, only half of the 34 tasks covered in training were done once during the first four months back on the job. The supervisor's attitudes about the trainee (how much the trainee was liked and the perceived potential for the trainee) and workgroup support were particularly important in establishing how much of an opportunity the trainee had to perform trained tasks on the job. (Note that this finding suggests the operation of a self-fulfilling prophecy in the context of a leader-member exchange relationship; that is, a subordinate who is a favored member of a supervisor's in-group will likely receive more encouragement and support for learning and applying skills on the job.)

Organisational climate refers to a range of characteristics of an organisation, such as policies, reward systems and managerial behaviour, to which employees attach meaning on the basis of their own values, beliefs, needs and other individual characteristics. Tannenbaum and Yukl (2002) define climate as perceptions of the environment that evolve out of interaction among organisational members. An organisational climate is said to exist when a group of individuals share a common perception of the work context. An example of this is the positive correlation shown between social support and motivation to learn and between social support and trainee self-efficacy (Wagner and Gooding, 2007). Other studies proved a positive relationship between an 'updating' climate (one that encourages updating of technical knowledge and skills and personal growth) and attendance and interest in training, seminars and professional meetings.

The supports-in-organization variables come from the concept of social support that is said to be influential when employees believe that other client systems in the organization such as the supervisors and peers provide them with opportunities for practicing new skills and knowledge in the job setting (Noe,1986). Opportunities to practice ensures that when trainees have plenty of chances to apply what they have learned to their jobs, a larger amount of training content can be transferred (Ford *et al.,1992*). Basically, there are four major sources of social support-subordinate, peer, supervisor and top management (Facteau *et al.,1995*).

Continuous- learning culture is defined as "a pattern of shared meaning of perceptions and expectations by all organizational members that constitute an organizational value or belief" Tracey *et al*,1995). A culture is established by a system of shared beliefs among a group of people, such as shared belief that the organization encourages instructional innovation. A key determinant of education and training success may be the degree to which the organizational learning culture. A strong learning culture provides cognitive as well as motivational orientation to learning. It often expects that its trainees will acquire higher order skills instead of verbal

information outcomes. This cultural commitment to learning often takes more specific forms –as an incentive to apply new skills ,time or resource allowance to apply them, the cultivation of a supervisor or peer support network, and clear policies on the importance of continuous learning.

Roullier and Goldstein (2008) suggest the transfer climate consists of two components, situational cues and consequences. Both cues and consequences act as reminders for trainees to use their training on their return to the job. Situational cues refer to the extent to which aspects of a situation encourage an employee to use what has been learned in training. Specific cues proposed by Roullier and Goldstein are goal cues, social cues, task and structural cues, and self control cues. Consequences refer to the degree to which employees are rewarded for applying what has been learned in training, and includes positive feedback, negative feedback, punishment and no feedback.

The opportunity is the extent to which a trainee is provided with, or actively obtains work experiences relevant to the tasks for which they were trained. Ford and Weissbein (2007), in which three measures of opportunity to perform were identified. The most direct measure is breadth, or the number of different trained tasks used on the job. The second measure is activity level, or the number of times each trained task is used on the job. This is useful as the more times a task is performed, the more likely it is that performance will improve. The third is task type, or the difficulty of the trained tasks performed on the job. Goldstein (2007) suggests these three measures provide a multi-dimensional perspective to the opportunity to perform.

Another major component of work environment is task constraints. Mathieu *et al* (1992) found that task constraints were shown to be negatively, but only marginally, related to training motivation. A study by Facteau *et al.(*1995) revealed that manager's perceptions of task constraints in the environment were not significantly related to their pretraining motivation and

perceived training transfer. In summary, transfer can be facilitated when the trainee has the opportunity to practice new learned skills back on the job. This can depend on supervisory support and assistance. One suggestion, as yet untested, is to form support groups among trainees following a training experience.

Training environment that includes: training facilities, site layout, sound lighting, hardware environment, classroom climate, student involvement of the soft environment. Therefore, only the training managers and trainers work together to create a better learning atmosphere and environment. According to (Martin, 2010; Ford, and Weissvein, 1997).Training environment have an effect on training effectiveness on human resource practices among employees.

Workplace design includes the design of buildings, their interiors, and the surrounding outdoor areas. It encompasses the "layout and appearance of buildings, the arrangement and properties of rooms, characteristics of equipment and furniture, and the associated ambient conditions (sound, light, temperature, air)" (Sundstrom, 1985, p. 174). The design of work and living environments can support or constrain behavior and it acts as a catalyst (that is, mediating effect) for releasing latent behavior (Gans, 1968). Becker (1981) proposes that workplace design contributes to organizational effectiveness in two important ways: it directly supports work tasks (that is, work quantity, and quality and style of work) and it acts as a catalyst for organizational outcomes (for example, absenteeism and turnover).

Quinones (2007) integrates a number of studies examining the role of contextual influences, such as participation, framing of training, and organizational climate, on training effectiveness. Participation refers to the level of involvement trainees have in training decisions. A review by Wagner and Gooding (1987) states the benefits of participation as being increased decision acceptance, commitment, motivation and productivity. In particular, a number of studies have

been carried out around the issue of choice (Baldwin *et al* 2001, Hicks and Klimoski 2007). In general, positive links have been found between a trainee choosing to attend and motivation, self-efficacy, and learning.

Framing is the context created by the information an organisation provides about a training program. This could be information about content and outcomes, leading to particular expectations. It could also be something about the wording or framing of the message that conveys a subtle (or not so subtle) threat to some people, for example a perceived threat to job security. Tannenbaum *et al* (2001) found that high levels of training fulfilment were associated with increased training motivation, self-efficacy and organisational commitment, their training fulfilment measure incorporating expectations of content, perceptions of actual content and desired content. This finding suggests organisations should be active in ensuring training content matches expectations. It also highlights the need for organisations to think hard about the information they communicate to trainees. Quinone (2007) suggests the most important aspect of framing is for organisations to be aware of how information can be perceived and interpreted.

### 2.3.3 Training Design

Learning from a training program is a necessary but not sufficient cause for transfer of training to occur (Robinson and Robinson, 2009). That is, the potential for transfer depends on the quality and depth of the original learning that occurs in the training; Rouiller and Goldstein (2003) found that better learners did better at transferring what they learned. The quality and depth of learning depend on the characteristics of the design and delivery of the training. Baldwin and Ford (2008) proposed a model of factors in the training process that can affect transfer. According to this model, transfer will be enhanced when the training design includes identical elements, the

general principles of a skill are taught, a variety of stimulus conditions are presented in the training to increase generalizability, and, generally, distributed training practices are used.

Poor instructional design skills are also in evidence in the use of instructional strategy for all types of learning outcomes (e.g., lecturing), failure to ensure that the conditions for learning for a particular type of learning outcome are present, teaching at a rule or procedural level instead of giving general and deeper principles, failure to give multiple examples and non-examples of concepts in a variety of contexts, providing inadequate practice time and poor feedback, or employing inadequate test designs (Smith-Jentsch, Salas and Brannick, 2001). Many times during instruction, the trainer does not take the opportunity to provide additional or supportive guidance on using the skills back on the job. It is often up to the students to translate theoretical concepts and models into procedures and practice at the workplace. While bright students may be able to do this, it places too great of a cognitive load on mediocre and slower students, who will have great difficulty if they can do it all.

The training design factors which affect transfer of training, can be grouped into three areas of literature: Learning principles, Developments in cognitive psychology and Guidelines for increasing training effect. A National Research Council Report (NRC, 1991), looking at methods of enhancing human performance, noted two aspects of learning that relate to post-training performance: the retention or durability of newly learned procedural knowledge, and the flexibility with which these newly learned skills can be generalized into new conditions. Superficial and abbreviated training processes can compromise both the retention and flexibility of learning. Retention and transfer increase to the extent that "original learning" in the training is strong, an outcome that can be produced, in part, by overlearning training designs. With overlearning, practice training in a skill continues beyond the point of skill mastery. That is, overlearning involves repeated practice to a point of automaticity; overlearning can also build

trainee confidence or self-efficacy in using the skills back on the job (Binder, 2010). Other conditions noted by the National Research Council that facilitate transfer include: explanations that build the learner's understanding of the task, active learner participation in the training, refresher training, and a high degree of perceived identity between training and real-world conditions.

In a field experiment with 38 frontline supervisors in an active listening training program, May and Kahnweiler (2000) compared the effects of mastery or overlearning training to that of a more traditional (limited practice) design on learning, behavior demonstration and transfer back to the job. There was a moderately strong and significant relationship ($r = .34$, $p < .05$) between knowledge retention as tested after the program (learning) and behavior reproductions of the skills (transfer) as observed in rated video-taped examples. Transfer was rated by coworkers in surveys four weeks after the programs; there was very little evidence that mastery training led to transfer, though. The authors speculated that the reason for the low transfer impact may have been due to limited practice opportunities and deflated transfer rates on the trained skills.

Cannon-Bowers, Rhodenizer, Salas and Bowers (1998) summarized the literature on the effects of "pre-practice conditions" on learning and transfer. Pre-practice conditions are those training procedures that impact the trainee's receptivity and acquisition of knowledge prior to skill practice exercises in the training program. They noted that the following factors should contribute to transfer: attentional advice that teach general strategies for doing the task; metacognitive strategies that teach self-regulation; and team pre-briefs that define performance expectations and clarify team member roles and responsibilities. Other pre-practice conditions – advance organizers, promotion of learning mastery goals, and providing preparatory information about practice exercises and likely consequences – should lead to better skills acquisition, which

should in turn lead to better original learning. Based on this review, they recommend the use of these various procedures as part of the design of training programs.

A goal-setting activity may be included as part of a training program as a way to affect transfer of training. In this procedure, trainees write their own goals for when and how to apply what they have learned to their work. Two studies have found that benefits when trainees set transfer goals. Werner *et al* (2004) looked at the transfer practices of 150 undergraduate students taking an assertiveness training program. All students received the same one hour training program, but a randomly formed experimental group was also put through a pre-training program pointing out situations when assertiveness skills were needed, and post-training efforts at setting goals and keeping a checklist of assertiveness activities for 4 weeks following the program. The pre-training intervention showed no effect. However, the post-training goal-setting and diary keeping work did yield significant improvements in retention of what was learned and reproduction of the skills in a simulated situation where assertiveness skills could be applied.

The second study (Brown and McCracken, 2009) experimented with the effects of two kinds of goal-setting activities against a "do your best" (DYB) activity. Seventy-two managers from Canadian government organizations, participating in the same university-based management development program, were randomly assigned to one of three groups. A "distal goals" group was told to set a goal for how many times they would use the training's skills over the next six week period; they then shared these goals with about 5 peers. A second, "proximal goals" group did the same thing, except they were told to make goals for two, four and six week periods. The third group was simply told to do their best in applying what they learned; they also talked about this in small groups. After six weeks, self-reports of skill usage were collected. The distal goal group was *less* effective in transfer than the other two groups. Prior research (Latham and Seijts,

1999) found that DYB goals are better than distal goals when learning new tasks. Specific, near-term goal-setting seems recommended.

Salas and Canon-Bowers (2001) simplified the key elements even further, suggesting that the most effective instructional strategies are created around four basic principles: present relevant information or concepts to be learned; demonstrate the knowledge, skills or attitudes to be learned; create opportunities to practice and provide feedback during and after practice. Some elements of these key principles and guidelines, such as relevant information and adapting to prior knowledge of the trainee, overlap into another more 'humanist' body of literature, that of adult leaning theory.

In summary, there are a number of lessons for how training programs can be designed and organized to promote transfer. For example, such principles as overlearning, explanation, active participation, and identical elements all are argued to contribute to transfer. Another design principle that has received empirical support is that of relapse prevention. Here, trainees anticipate problems they may experience back on the job, plan ways to deal with those problems, and manage their behaviors accordingly. In general, research on relapse prevention strategies supports its effect on producing transfer, although the evidence is not uniformly favorable. Another practice that can be included as part of a training program is the setting of goals for performance back on the job. When combined with feedback, goal setting also produces results. Goal-setting appears to work better in supportive conditions at the worksite, while such moderating factors for relapse prevention have not been noted. Comparing goal-setting or relapse prevention, it is not yet known whether one method is better than the other, or whether it makes any difference if they are combined. It appears that the relative effectiveness of either does depend on both the self-efficacy levels as well as the transfer climate at the workplace. The lower the scores on either, the more an intensive preparation (RP) module is indicated. Exactly

what specific factors may be most important in the transfer climate is not known, though, although other research would suggest that supervisory factors would be important.

### 2.3.4 Trainer Characteristics

A study conducted by Brown and McCracken (2009) found that within the transfer influences category, 14% of the responses described specific attributes of trainers that are important to supporting training transfer. They labeled them trainer characteristics and defined this subcategory as a trainer's knowledge of the subject matter, professional experience, and knowledge of teaching principles (such as adult learning strategies) as important in supporting training transfer.

Following several interviews and a survey of 300 professional trainers in the United Kingdom, Bennett and Leduchowicz (2003) suggested that effective trainers were sensitive, showed a genuine interest in training and developing others and themselves, and were professional in the workplace. The International Board of Standards for Training, Performance and Instruction (IBSTPI) compiled a series of competencies for effective instructors that included good communication and delivery skills, the ability to motivate and engage learners, and feedback about performance (Klein, Spector, Grabowski, & de la Teja, 2004). The literature on trainer effectiveness has been useful in advocating best practices. However, only a handful of studies have linked these competencies to trainee effectiveness, particularly in terms of problem solving where trainees are required to apply what they have learned in their work place.

One quality of trainer delivery considered particularly influential in learning transfer is trainer expressiveness. An expressive trainer is one who shows appropriate vocal intonations and is generally fluent through sounding natural and normal in rate of speaking. In human resource development, trainer expressiveness is part of a subset of trainer behaviours named

"immediacy," whereby trainers motivate trainees through their nonverbal and verbal behaviour (Brown, Rietz, & Sugre, 2005).

A trainer can be inexpressive through speaking in a monotone voice with lots of "ums" and "ahs," or expressive through use of an animated vocal tone and maintenance of vocal fluency. Research examining the effects of trainer expressiveness on recall suggests that the more expressive the instructor, the more trainees remember (Brown *et al.*, 2005). In the context of the seductive details research, it seems that a nonseductive, expressive trainer will be most effective for trainee recall. Seductive details might be beneficial for problem solving because the distractive nature of seductive details allows trainees to form their own framework of events and gain a more comprehensible model.

Human Resource Development professionals also vary in the type of instructional material they include during training. When lecturing, trainers can stick closely to the instructional material through careful focus on instructional objectives; or they can use interesting material to spice up otherwise unexciting instruction in order to enhance adult learners' motivation to learn (e.g., Noe & Colquitt, 2002). Obviously, if the information itself is interesting (such as a discussion about organizational politics), trainers probably see little need to spice up their material; however, there will be occasions when the material is dry (discussion of statistical analyses) and the trainer will be tempted to add a little zest to the material. For effective problem solving to occur, training design needs to include learning aids that enable trainees to learn, organize, and recall training content. According to Holton (1996), one reason transfer frequently fails is that training design rarely provides for transfer of training. One way in which trainers can maximize trainees' motivation to transfer the instructional material is to include strategies that increase their interest. Intuitively, trainers who adopt the strategy of adding interest to otherwise dull material should be

most effective in motivating trainees to learn more. However, the seductive details effect suggests trainers who use interesting, tangential material can distract trainees and hinder recall.

## 2.3 Summary and Research Gaps

The purpose of training is to achieve successful transfer of skills with the resources available. The research study predicts that training programmes would result in high of training transfer if the factors are carefully considered.

The study sought to answers to the question on how well training should be conducted while putting into consideration some issues in the environment that may affect its transfer. Most of the studies cited in the literature are conducted in the developed countries whose strategic approach and financial footing is different from that of Kenya. Thus there exists a literature gap on the factors affecting training transfer in Kenya. This study therefore seeks to fill this gap by establishing the factors affecting transfer of training in MOSD.

## 2.4 Conceptual Framework

The research relates trainee characteristics, the environment (work environment and training environment), training design and trainer characteristics (Independent variables) with transfer of training of military officers at MOSD (dependent variable).

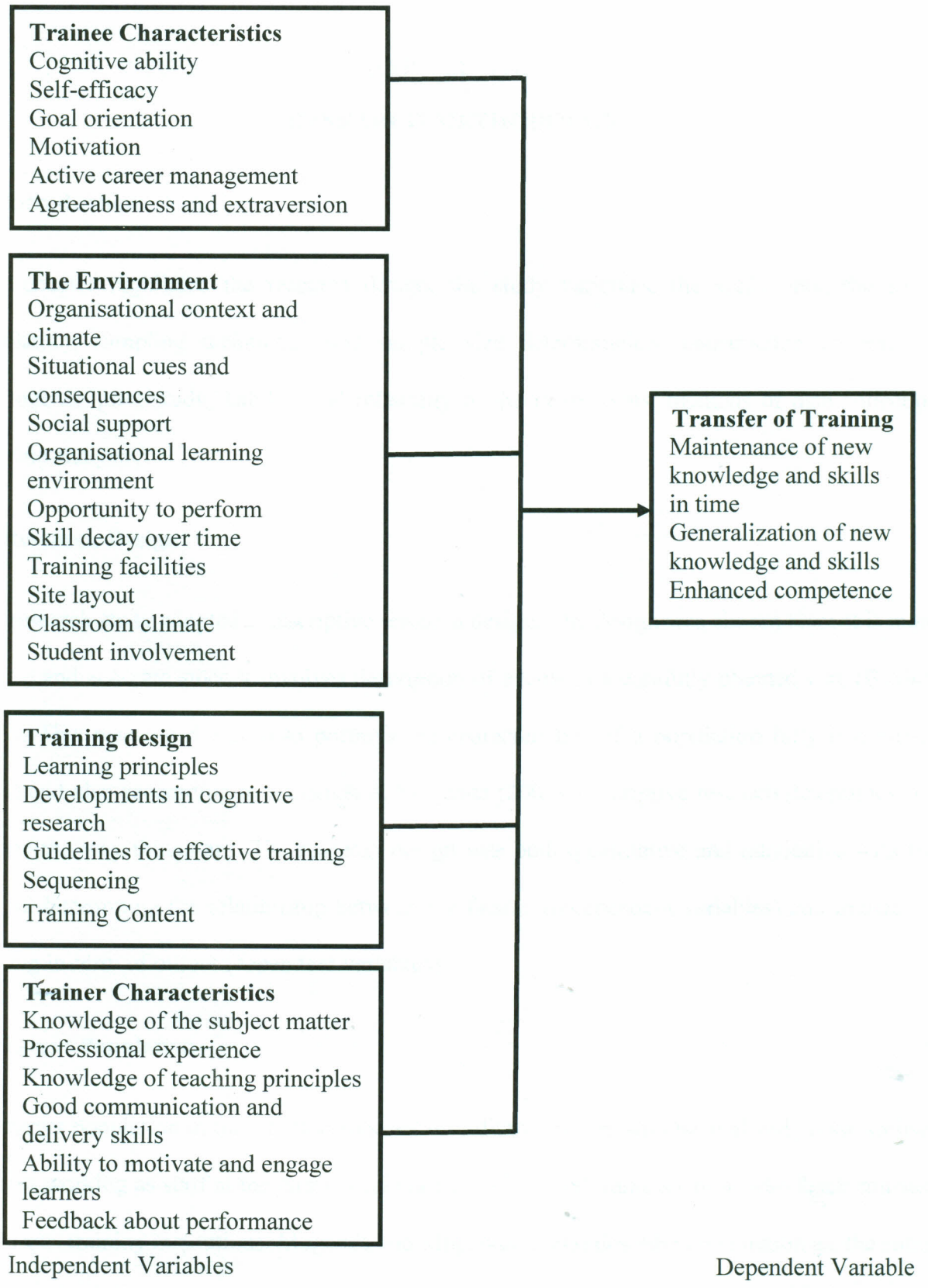


**Figure 2.1: Conceptual framework**

Source: Author, (2012)

# CHAPTER THREE

# RESEARCH METHODOLGY

## 3.1 Introduction

This chapter highlights the research design, the study variables, the study area, the study population, sampling techniques and sample size determination, construction of research instruments, pilot study, validity and reliability of the instruments, methods of data collection and data analysis.

## 3.2 Research Design

The research study adopted a descriptive research design. The design was chosen since it is more precise and accurate since it involves description of events in a carefully planned way (Babbie, 2002). This research design also portrays the characteristics of a population fully (Chandran, 2004) and also aaccording to Mugenda & Mugenda (2003), descriptive research determines and reports the way things are. The research design was both quantitative and qualitative with the aim of determining the relationship between the factors (independent variables) and transfer of training in-term of output (dependent variables).

## 3.3 Target Population

The target population in this study composed of military officers who have already done various courses working as staff at the Army headquarters offices and trainers (those who teach courses) in various training institutions. Mugenda and Mugenda (2003) described population as, the entire group of individuals or items under consideration in any field of inquiry and have a common

attribute. The population was expected to provide reliable information regarding transfer of training in the Ministry of State for Defence.

**Table 3.1: Distribution of Target Population**

| | **Population** | **Percentage** |
|---|---|---|
| Trained staff at Army Headquarters | 124 | 43.4 |
| Defence Staff College trainers | 41 | 14.3 |
| Kenya Military Academy trainers | 67 | 23.4 |
| Defence Forces School of Higher Education trainers | 12 | 4.2 |
| Defence Forces Technical College trainers | 42 | 14.7 |
| **Total** | **286** | **100.0** |

(Source: Ministry of State for Defence, 2012)

### 3.4 Sample and Sampling Technique

Sampling frame is the listing of all elements of the population from which a sample was drawn. It is a complete and correct listing of population members only (Cooper & Schindler, 2006). A sample is a set of entities drawn from a population with the aim of estimating characteristic of the population (Siegel, 2003). It is a fraction or portion of a population selected such that the

selected portion represents the population adequately. Cooper and Schindler (2003) explained that the basic idea of sampling is, selecting some of the elements in a population, so that the same conclusions can be drawn about the entire population. This resulted to reduced cost and greater accuracy of results. This research study used a stratified random sampling method to select 30% of the respondents. According to Mugenda and Mugenda (2003) a sample size of between 10 and 30% is a good representation of the target population. The researcher therefore selected 86 respondents from the military institutions.

**Table 3.2: Sample size**

| | **Population** | **Ratio** | **Sample size** | **percent** |
|---|---|---|---|---|
| Trained staff at Army Headquarters | 124 | 0.3 | 37 | 43 |
| Defence Staff College trainers | 41 | 0.3 | 12 | 14 |
| Kenya Military Academy trainers | 67 | 0.3 | 20 | 23 |
| Defence Forces School of Higher Education trainers | 12 | 0.3 | 4 | 5 |
| Defence Forces Technical College trainers | 42 | 0.3 | 13 | 15 |
| **Total** | **286** | **0.3** | **86** | **100** |

(Source: Researcher, 2012)

### 3.5 Data collection Instruments

Primary data according to Kothari (2004) is the data collected a fresh for the first time while secondary data is that data that has already been collected and passed through statistical process. Andre (2004) explains that primary data is data that is used for a scientific purpose for which it was collected. The researcher used primary data for this study and was collected using questionnaires; the questionnaires included closed and open ended questions. Closed ended questions were used in an effort to conserve time and money as well as to facilitate an easier analysis as they were in immediate usable form; while the open ended questions were used as they encouraged the respondent to give an in-depth and felt response without feeling held back in revealing of any information. With open ended questions, a respondent's response gives an insight to his or her feelings, background, hidden motivation, interests and decisions.

#### 3.5.1 Data collection procedure

The study used primary data. On the primary data, questionnaires were used to collect data. The researcher administered the questionnaire individually to all respondents. Care and control by the researcher was exercised to ensure all questionnaires issued to the respondents are received. To achieve this, the researcher maintained a register of questionnaires, which were sent, and which were received. The questionnaire was administered using a drop and pick later method to the sampled respondents.

#### 3.5.2 Validity

The questionnaire designed by the researcher based on the research questions was pilot tested to refine the questions before it can be administered to the selected sample. A pilot test was conducted to detect weakness in design and instrumentation and to provide proxy data for selection of a probability sample. Mugenda and Mugenda (2003) asserted that, the accuracy of

data to be collected largely depended on the data collection instruments in terms of validity and reliability

According to Somekh, and Cathy (2005) validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity which is employed by this study is a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. Expert opinion was requested to comment on the representativeness and suitability of questions and give suggestions of corrections to be made to the structure of the research tools. To establish the validity of the research instrument the researcher sought opinions of experts in the field of study especially the lecturers in the department of business administration. This helped to improve the content validity of the data that was collected. It facilitated the necessary revision and modification of the research instrument thereby enhancing validity.

### 3.5.3 Reliability and Reliability Analysis

Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. The researcher intends to select a pilot group of 15 individuals from the target population to test the reliability of the research instruments. In order to test the reliability of the instruments, internal consistency techniques was applied using Cronbach's Alpha. The alpha value ranges between 0 and 1 with reliability increasing with the increase in value. Coefficient of 0.6-0.7 is a commonly accepted rule of thumb that indicates acceptable reliability and 0.8 or higher indicated good reliability (Mugenda, 2008). The pilot data was not included in the actual study.

A pilot study was carried out to determine reliability of the questionnaires. The pilot study involved the sample respondents from the institution. Reliability analysis was subsequently done

using Cronbach's Alpha which measures the internal consistency by establishing if certain item within a scale measures the same construct.

**Table 3.3: Reliability Analysis**

| Scale | Cronbach's Alpha | Number of Items |
|---|---|---|
| Trainee Characteristics | 0.831 | 9 |
| Environment | 0.732 | 16 |
| Training design | 0.931 | 11 |
| Trainer Characteristics | 0.647 | 6 |

(Source: Survey data 2013)

Gliem and Gliem (2011) established the Alpha value threshold at 0.6, thus forming the study's benchmarked. Cronbach Alpha was established for every objective which formed a scale. The table shows that all the four variables were reliable as their reliability values exceeded the prescribed threshold of 0.6.

### 3.6 Data Analysis and Presentation

After data collection data analysis was done. This is a process is important as it makes data sensible. Data analysis tool used is dependent on the type of data to be analyzed depending on whether the data qualitative or quantitative. The quantitative data in this research was analyzed by descriptive statistics using statistical package for social sciences (SPSS) version 21. This version was used since it is the most recent version of SPSS and hence it has got advanced features. Descriptive statistics includes mean, frequency, standard deviation and percentages to profile sample characteristics and major patterns emerging from the data. In addition to measures of central tendencies, measures of dispersion and graphical representations was used to tabulate the information. To facilitate this Likert Scale was used which enables easier presentation and

interpretation of data. Data was presented in tables, charts and graphs. Completeness of qualitative data collected was checked for and cleaned ready for data analysis. Content analysis was used in processing of this data and results presented in prose form. According Kothari (2004), Content analysis is a summarizing, quantitative analysis of messages that relies on the scientific method (including attention to objectivity, intersubjectivity, a priori design, reliability, validity, generalisability, replicability, and hypothesis testing) and is not limited as to the types of variables that may be measured or the context in which the messages are created or presented.

The next technique involved factor analysis as the main component of quantitative data analysis. Factor analysis is a systematic, statistical procedure used to uncover relationships amongst several variables. This procedure enables numerous correlated variables to be condensed into fewer dimensions known as factors. According to Brown (2006 p. 12-13) the fundamental intent of factor analysis 'is to determine the number and nature of latent variables or factors that account for the variation and covariation among a set of observed measures, commonly referred to as indicators'. A factor in this case is defined as 'an unobservable variable that influences more than one observed measure and that accounts for the correlations among these observed measures' (Brown 2006 p. 13). The study undertook an exploratory factor analysis—a level of analysis that involves examining the variable relationships without a predetermination of a model in which to fit the results (Bryman and Cramer 1997). Four basic steps were followed in undertaking factor analysis as listed below: KMO and Bartlett's test; factor extraction; factor retention and factor rotation. Finally interpretation of factor analysis was done from the results of rotation. In its procedure, rotation is applied to identify meaningful factor names or descriptions. A rotation, which requires that the factors remain uncorrelated, is an orthogonal rotation, while a rotation, which requires the factors to be correlated, is called Oblique rotation.

In this study, oblique rotation using Promax was carried out because some of the underlying constructs and variables may be inter-correlated. Factor rotation was used to re-orient the factor loadings so that the factors are more interpretable. Use of Oblique rotation allows for correlations between factors since many attitudinal dimensions are in fact likely to be correlated. For easier interpretation of the factors, only the pattern matrix is examined (Rummel, 1970). The factor extraction method adopted for this study is principal axis factoring. Principal Axis Factoring, unlike principal component analysis, relaxes the assumption that the communality is equal to one. As a result, using this method enables the factor loadings to be higher, which leads to greater interpretability.

To check for multicollinearity, SPSS was used to examine the correlations between variables in the questionnaire data to establish sets of underlying variables or factors that explain the variation in the original (questionnaire/measured) variables. When correlations between the variables are high, it is possible to confuse some of the factors and/or that some variables may be redundant measures. Factor analysis allows the large number of the questionnaires variables to be reduced to more limited sets of important and useful factors

In addition, a multivariate regression model was applied to determine the relative importance of each of the four variables with respect to training transfer. Multiple regressions is a flexible method of data analysis that may be appropriate whenever quantitative variables (the dependent) is to be examined in relationship to any other factors (expressed as independent or predictor variable). Relationships may be non-linear, independent variables may be quantitative or qualitative and one can examine the effects of a single variable or multiple variables with or without the effects of other variables taken into account, (Cohen, West and Aiken, 2003). The regression model was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where:

$Y$ = Transfer of Training

$\beta_0$ = Constant Term

$\beta_1, \beta_2, \beta_3$ and $\beta_4$ = Beta coefficients

$X_1$= Trainee Characteristics

$X_2$= Environment

$X_3$= Training design

$X_4$= Trainer Characteristics

$\varepsilon$ = Error term

# CHAPTER FOUR

# RESEARCH FINDINGS AND DISCUSSION

## 4.1 Introduction

The main objective of the study was to find out the factors affecting transfer of training within military officers' training in the Ministry of State for Defence. Quantitative data was analyzed through quantitative analysis. Graphs, pie charts and tables were used to present the data. The questionnaires were dropped and later picked at a later date to allow the respondents to fill the questionnaires at their own time. Once the respondents answered the questionnaire, data was then coded and analyzed using SPSS.

### 4.1.1 Response Rate

The study targeted 86 respondents in collecting data with regard to factors affecting transfer of training within military officers' training in the Ministry of State for Defence. From the study, 68 respondents out of the 86 sample respondents filled-in and returned the questionnaires making a response rate of 79.1%. This reasonable response rate was achieved after the researcher made personal calls and physical visits to remind the respondent to fill-in and return the questionnaires. This response rate was good and representative and conforms to Babbie (2002) stipulation that a response rate of 50% is adequate for analysis and reporting and so 79.1% was even better.

## 4.2 Demographic information

This is the information describing the characteristic of the respondents.

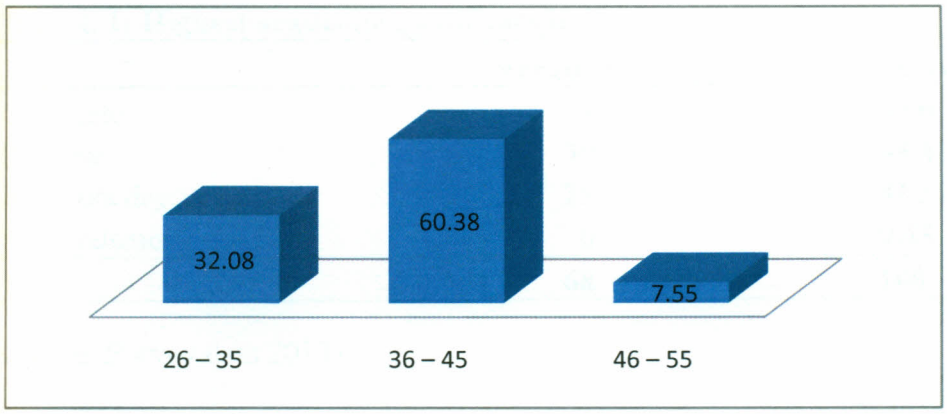


**Figure 4. 1: Age of the respondents**

(Source: Survey data 2013)

The study sought to find out the age of the respondents. According to the findings, 60.38% of the respondents were aged 36-45 years, 32.08% were aged 26-35 years and 7.55% were aged 46-55 years.

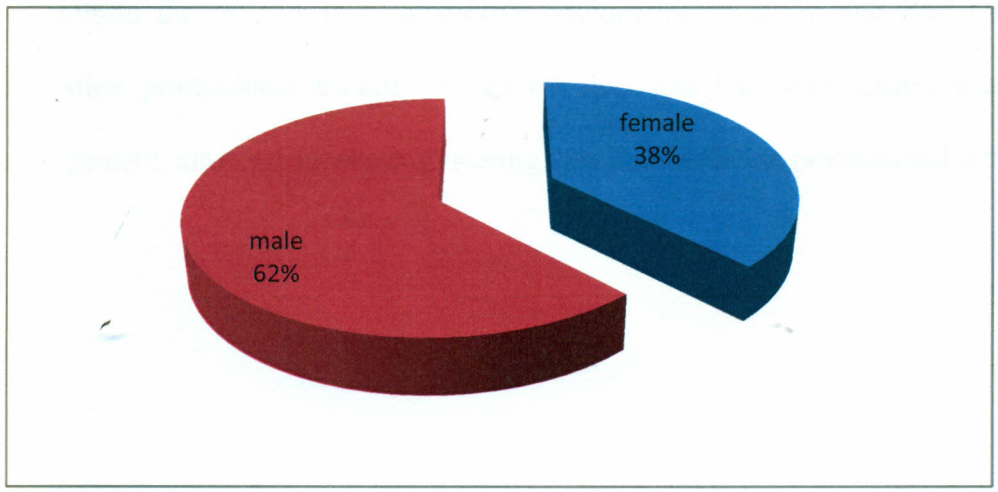


**Figure 4. 2: Gender of the respondents**

(Source: Survey data 2013)

The respondents were requested to state their gender. Majority (62%) of the respondents were male while 38% were female.

**Table 4. 1: Highest academic qualification of the respondents**

| | Frequency | Percentage |
|---|---|---|
| Certificate | 4 | 5.66 |
| Diploma | 30 | 43.4 |
| Bachelors degree | 28 | 41.51 |
| Post graduate | 6 | 9.43 |
| **Total** | **68** | **100** |

(Source: Survey data 2013)

Highest academic qualification of the respondents was important in this study. From the findings, 43.40% of the respondents had attained a diploma, 41.51% of the respondents had attained a bachelor's degree, 9.43% of the respondents had attained a post graduate and 5.66% of the respondents had attained a certificate.

The respondents were requested to state other professional training they had. The respondents had information technology, disaster management, computer and teaching professional training. In addition the trainers had automotive engineering, aviation and Post Graduate Diploma in Education professional training. Moreover they had logististic management, human resource management, anti-corruption, engineering, law and medicine professional training.

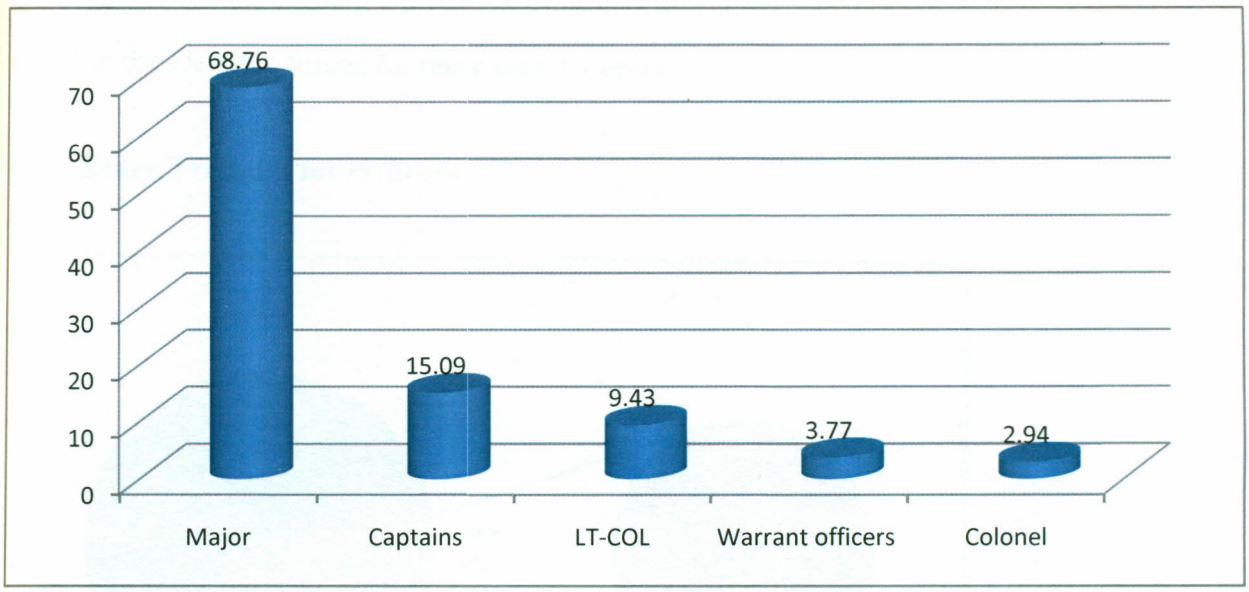


**Figure 4. 3: Designation of the respondents**

(Source: Survey data 2013)

The study sought to find out the designation of the respondents. According to the findings, 68.76% of the respondents were majors, 15.09% were captains, 9.43% were LT-COL(Lieutenant Colonel), 3.77% were warrant officers and 2.94% were colonels.

**Table 4. 2: Period the respondents had served in the Defence forces**

| | Frequency | Percentage |
|---|---|---|
| 1-5 years | 9 | 13.21 |
| 6-10 years | 41 | 60.38 |
| 11-15 years | 12 | 16.98 |
| More than 15 years | 6 | 9.43 |
| Total | 68 | 100 |

(Source: Survey data 2013)

The respondents were requested to indicate the period the respondents had served in the Defence forces. Majority (60.38%) of the respondents had served in the Defence forces for 6-10 years, 16.98% of the respondents had served in the Defence forces for 11-15 years, 13.21% of the

respondents had served in the Defence forces for 1-5 years and 9.43% of the respondents had served in the Defence forces for more than 15 years.

### 4.3 Military Training for Officers

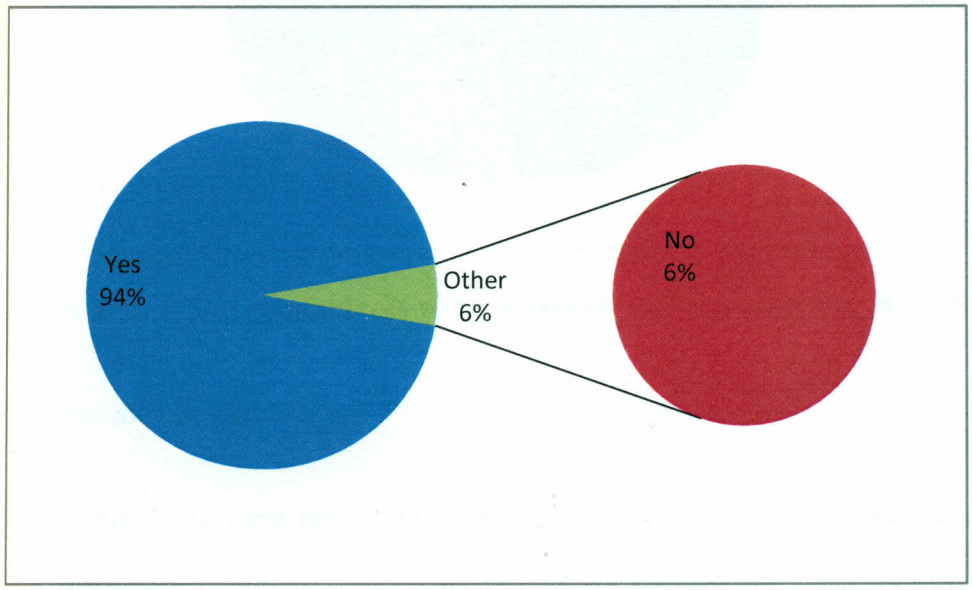


**Figure 4. 4: If the respondents were directly involved in training**

(Source: Survey data 2013)

The study sought to find out if the respondents were directly involved in training. According to the findings, 94% of the respondents were directly involved in training while 6% were not directly involved in training.

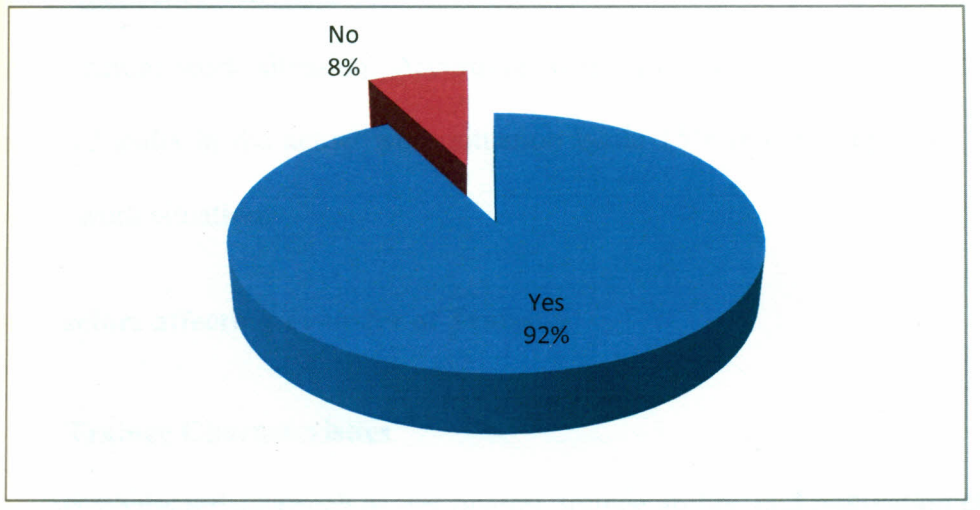


**Figure 4. 5: If the respondents were currently undertaking any form of training**

(Source: Survey data 2013)

The respondents were requested to indicate if the respondents were currently undertaking any form of training. From the findings, 92% of the respondents were currently undertaking training while 8% were not currently undertaking training.

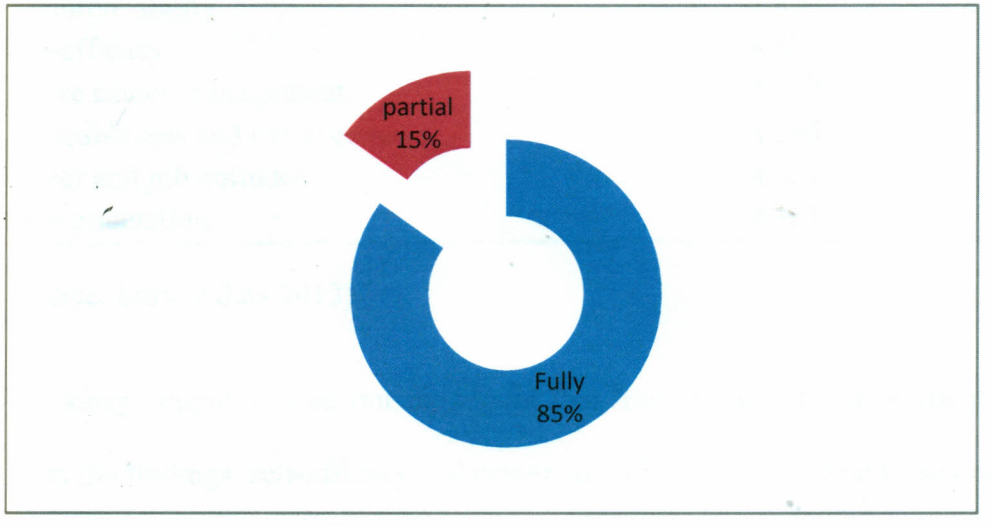


**Figure 4. 6: Extent that respondents applied the acquired skills in the actual work situation**

(Source: Survey data 2013)

The respondents were requested to indicate the extent that respondents applied the acquired skills in the actual work situation. According to the findings, 85% of the respondents applied the acquired skills in the actual work situation while 15% did not apply the acquired skills in the actual work situation.

### 4.4 Factors affecting Transfer of Training

#### 4.4.1 Trainee Characteristics

Trainee characteristics such as personality, trainee ability, and motivation effects were originally identified by training practitioners as factors affecting transfer of training (Baldwin and Ford, 1988).

**Table 4. 3: Extent that trainee characteristics affect transfer of training**

| Trainee characteristics | Mean | Standard deviation |
|---|---|---|
| Trainee personality | 4.351 | 0.147 |
| Trainee ability | 4.291 | 0.705 |
| Trainee motivation | 4.071 | 0.262 |
| Cognitive ability | 3.872 | 0.304 |
| Self-efficacy | 4.632 | 0.514 |
| Active career management | 3.927 | 0.402 |
| Agreeableness and extraversion | 4.294 | 0.342 |
| Career and job attitudes | 4.501 | 0.202 |
| Goal orientation | 4.351 | 0.511 |

(Source: Survey data 2013)

The study sought to find out the extent that trainee characteristics affect transfer of training. From the findings, self-efficacy and career and job attitudes affected transfer of training to a very great extent as shown by a mean of 4.632 and 4.501 respectively. Rotter (1966) generalized expectancy that organizational outcomes in terms of rewards and reinforcements in life are controlled either by an individual's own actions (internality) or by other forces (externality).In

addition, trainee personality, goal orientation, agreeableness and extraversion and trainee ability affected transfer of training to a great extent as shown by a mean of 4.351, 4.351, 4.294 and 4.291 respectively. Trainee characteristics such as personality, trainee ability, and motivation effects were originally identified by training practitioners as factors affecting transfer of training (Baldwin and Ford, 1988). Moreover, trainee motivation, active career management and cognitive ability affected transfer of training to a great extent as shown by a mean of 4.071, 3.927 and 3.872 respectively. Bramley (2006) explains that individuals who are low in self-efficacy have difficulty coping with environmental demands. Mumford *et al* (2009) revealed trainee characteristics such as aptitude and motivational levels were among the most consistent predictors of trainee performance, stronger even than course content variables.

### 4.4.2 The Environment

Trainees have some understanding about the general extent to which factors in the workplace support employee training. These general perceptions of workplace support are referred to as the transfer climate.

**Table 4. 4: Extent that work environment affects transfer of training**

| Work environment | Mean | Standard Deviation |
|---|---|---|
| The extent of support in the organisation ( policies, reward systems and managerial behaviour) | 4.264 | 0.251 |
| The continuous learning culture | 4.023 | 0.147 |
| The task constraints | 4.318 | 0.504 |
| Organisational context and climate | 4.105 | 0.259 |
| Situational cues and consequences | 3.624 | 0.612 |
| Social support/ workgroup support | 3.814 | 0.713 |
| Supervisor's attitudes about the trainee | 3.291 | 0.105 |
| Opportunity to perform | 3.701 | 0.284 |
| Skill decay over time | 2.834 | 0.341 |

(Source: Survey data 2013)

The respondents were requested to indicate the extent that work environment affects transfer of training. According to the findings, the task constraints, the extent of support in the organization (policies, reward systems and managerial behavior) and organizational context and climate affected transfer of training to a great extent as shown by a mean of 4.318, 4.264 and 4.105 respectively. In addition, the continuous learning culture, social support/ workgroup support, opportunity to perform and situational cues and consequences affected transfer of training to a great extent as shown by a mean of 4.023, 3.814, 3.701 and 3.624 respectively. Moreover, supervisor's attitudes about the trainee and skill decay over time affected transfer of training to a moderate extent as shown by a mean of 3.291 and 2.834 respectively. Positive correlation was

shown between social support and motivation to learn and between social support and trainee self-efficacy (Wagner and Gooding, 2007).

Organizational climate refers to a range of characteristics of an organisation, such as policies, reward systems and managerial behaviour, to which employees attach meaning on the basis of their own values, beliefs, needs and other individual characteristics.

**Table 4. 5: Extent that training environment affects transfer of training**

| Training Environment | Mean | Standard deviation |
|---|---|---|
| The kind of training facilities available. | 4.624 | 0.802 |
| Hardware environment | 4.405 | 0.261 |
| Training facilities | 4.392 | 0.173 |
| Site layout | 4.108 | 0.169 |
| Classroom climate | 2.021 | 0.248 |
| Student involvement | 3.719 | 0.371 |
| Ambient conditions (sound, light, temperature, air) | 3.901 | 0.219 |

(Source: Survey data 2013)

The study sought to find out the extent that training environment affects transfer of training. From the findings, the kind of training facilities available affected transfer of training to a very great extent as shown by a mean of 4.624. In addition, hardware environment, training facilities and site layout affected transfer of training to a great extent as shown by a mean of 4.405, 4.392 and 4.108 respectively. Tannenbaum *et al* (2001) found that high levels of training fulfilment were associated with increased training motivation, self-efficacy and organisational commitment, their training fulfilment measure incorporating expectations of content, perceptions of actual content and desired content. Moreover, ambient conditions (sound, light, temperature, air) and

student involvement affected transfer of training to a great extent as shown by a mean of 3.901 and 3.719 respectively. To add, classroom climate affected transfer of training to a low extent as shown by a mean of 2.021. The design of work and living environments can support or constrain behavior and it acts as a catalyst (that is, mediating effect) for releasing latent behavior (Gans, 1968).

### 4.4.3 Training Design

The potential for transfer depends on the quality and depth of the original learning that occurs in the training.

**Table 4. 6: Extent that training design affects transfer of training**

| Training design | Mean | Standard Deviation |
|---|---|---|
| Learning principles | 3.804 | 0.307 |
| Developments in cognitive research | 4.625 | 0.105 |
| Guidelines for effective training | 4.839 | 0.842 |
| Sequencing | 4.317 | 0.424 |
| Training Content | 4.892 | 0.364 |
| Framing of training/training approach | 4.728 | 0.748 |
| Giving of multiple examples and non-examples of concepts in a variety of contexts | 4.205 | 0.572 |
| Providing inadequate practice time | 4.593 | 0.812 |
| Feedback mechanism | 3.182 | 0.246 |
| Inadequate test designs | 4.462 | 0.321 |
| Provision of additional or supportive guidance on using the skills back on the job | 4.936 | 0.601 |

(Source: Survey data 2013)

The study sought to find out the extent that training design affect transfer of training. According to the findings, provision of additional or supportive guidance on using the skills back on the job, training content and guidelines for effective training affected transfer of training to a very great extent as shown by a mean of 4.936, 4.892 and 4.839 respectively. Rouiller and Goldstein (2003) found that better learners did better at transferring what they learned. In addition, framing of training/training approach, developments in cognitive research and providing inadequate affected transfer of training to a very great extent as shown by a mean of practice time 4.728, 4.625 and 4.593 respectively. Moreover, inadequate test designs, sequencing, giving of multiple examples and non-examples of concepts in a variety of contexts and learning principles affected transfer of training to a great extent as shown by a mean of 4.462, 4.317, 4.205 and 3.804 respectively. To add, feedback mechanism affected transfer of training to a moderate extent as shown by a mean of 3.182. Poor instructional design skills are also in evidence in the use of instructional strategy for all types of learning outcomes (e.g., lecturing), failure to ensure that the conditions for learning for a particular type of learning outcome are present, teaching at a rule or procedural level instead of giving general and deeper principles, failure to give multiple examples and non-examples of concepts in a variety of contexts, providing inadequate practice time and poor feedback, or employing inadequate test designs (Smith-Jentsch, Salas and Brannick, 2001).

### 4.4.4 Trainer Characteristics

It is trainer's knowledge of the subject matter, professional experience, and knowledge of teaching principles (such as adult learning strategies) as important in supporting training transfer.

**Table 4. 7: Extent that trainer characteristics affect transfer of training**

| Trainer Characteristics | Mean | Standard Deviation |
|---|---|---|
| Knowledge of the subject matter | 4.826 | 0.304 |
| Professional experience | 4.704 | 0.701 |
| Knowledge of teaching principles (such as adult learning strategies) | 3.873 | 0.184 |
| Good communication and delivery skills | 3.906 | 0.259 |
| Ability to motivate and engage learners | 4.271 | 0.318 |
| Feedback about performance | 4.369 | 0.821 |

(Source: Survey data 2013)

The respondents were requested to indicate the extent that trainer characteristics affect transfer of training. From the findings, knowledge of the subject matter and professional experience affected transfer of training to a very great extent as shown by a mean of 4.826 and 4.704 respectively. According to Holton (1996), one reason transfer frequently fails is that training design rarely provides for transfer of training. In addition, feedback about performance, ability to motivate and engage learners, good communication and delivery skills and knowledge of teaching principles (such as adult learning strategies) affected transfer of training to a great extent as shown by a mean of 4.369, 4.271, 3.906 and 3.873 respectively. When lecturing, trainers can stick closely to the instructional material through careful focus on instructional objectives; or they can use interesting material to spice up otherwise unexciting instruction in order to enhance adult learners' motivation to learn (e.g., Noe & Colquitt, 2002).

**Table 4. 8: Extent the factors affect transfer of training**

| FACTORS | Mean | Standard deviation |
|---|---|---|
| Trainee characteristics | 4.207 | 0.235 |
| The environment | 3.854 | 0.612 |
| Training design | 3.79 | 0.204 |
| Trainer Characteristics | 4.356 | 0.521 |

(Source: Survey data 2013)

The study sought to find out the extent the factors affect transfer of training. According to the findings, trainer characteristics and trainee characteristics affected transfer of training to a great extent as shown by a mean of 4.356 and 4.207 respectively. In addition, environment and training design affected transfer of training to a great extent as shown by a mean of 3.854 and 3.79 respectively.

### 4.5 Factor Analysis

Factor analysis is a systematic, statistical procedure used to uncover relationships amongst several variables. This procedure enables numerous correlated variables to be condensed into fewer dimensions known as factors. The purpose of factor analysis is to discover simple patterns in the pattern of relationships among variables (Anderson, 2004). In the context of this research, the variables are the degree of agreement with various specific perception statements while the factors are the general underlying constructs. In its procedure, rotation is applied to identify meaningful factor names or descriptions.

A rotation, which requires that the factors remain uncorrelated, is an orthogonal rotation, while a rotation, which requires the factors to be correlated, is called Oblique rotation. In this study, oblique rotation using Promax was carried out because the proposed framework indicates that the underlying constructs and variables are inter-correlated. Factor rotation was used to re-orient the factor loadings so that the factors are more interpretable. Use of Oblique rotation allows for correlations between factors since many attitudinal dimensions are in fact likely to be correlated. For easier interpretation of the factors, only the pattern matrix is examined (Costello and Osborne, 2005).

**Table 4. 9: Communalities**

| | Initial | Extraction |
|---|---|---|
| Trainee personality | 1.000 | .879 |
| Trainee ability | 1.000 | .909 |
| Trainee motivation | 1.000 | .964 |
| Cognitive ability | 1.000 | .841 |
| Self-efficacy | 1.000 | .887 |
| Goal orientation | 1.000 | .908 |
| Active career management | 1.000 | .899 |
| Agreeableness and extraversion | 1.000 | .919 |
| Career and job attitudes | 1.000 | .874 |
| The extent of support in the organisation ( policies, reward systems and managerial behaviour) | 1.000 | .897 |
| The continuous learning culture | 1.000 | .853 |
| The task constraints | 1.000 | .811 |
| Organizational context and climate | 1.000 | .822 |
| Situational cues and consequences | 1.000 | .797 |
| Social support/ workgroup support | 1.000 | .890 |
| Supervisor's attitudes about the trainee | 1.000 | .869 |
| Opportunity to perform | 1.000 | .910 |
| Skill decay over time | 1.000 | .884 |
| The kind of training facilities available. | 1.000 | .787 |
| Hardware environment | 1.000 | .884 |
| Training facilities | 1.000 | .854 |
| Site layout | 1.000 | .841 |
| Classroom climate | 1.000 | .802 |
| Student involvement | 1.000 | .859 |
| Ambient conditions (sound, light, temperature, air) | 1.000 | .833 |
| Learning principles | 1.000 | .838 |
| Developments in cognitive research | 1.000 | .794 |
| Guidelines for effective training | 1.000 | .931 |
| Sequencing | 1.000 | .881 |
| Training Content | 1.000 | .906 |
| Framing of training/training approach | 1.000 | .889 |

| | | |
|---|---|---|
| Giving of multiple examples and non-examples of concepts in a variety of contexts | 1.000 | .951 |
| Providing inadequate practice time | 1.000 | .904 |
| Feedback mechanism | 1.000 | .891 |
| Inadequate test designs | 1.000 | .911 |
| Provision of additional or supportive guidance on using the skills back on the job | 1.000 | .898 |
| Knowledge of the subject matter | 1.000 | .874 |
| Professional experience | 1.000 | .926 |
| Knowledge of teaching principles (such as adult learning strategies) | 1.000 | .878 |
| Good communication and delivery skills | 1.000 | .869 |
| Ability to motivate and engage learners | 1.000 | .733 |
| Feedback about performance | 1.000 | .804 |

Extraction Method: Principal Component Analysis.

(Source: Survey data 2013)

The table above helps to estimate the communalities for each variance. This is the proportion of variance that each item has in common with other factors. For example 'Trainee motivation' has 96.4% communality or shared relationship with other factors. This value has the greatest communality with others, while 'Ability to motivate and engage learners' has the least communality with others of 73.3%.

**Table 4. 10: Total Variance Explained**

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.482 | 15.074 | 15.074 | 6.482 | 15.074 | 15.074 |
| 2 | 5.603 | 13.030 | 28.104 | 5.603 | 13.030 | 28.104 |
| 3 | 5.301 | 12.327 | 40.432 | 5.301 | 12.327 | 40.432 |
| 4 | 4.107 | 9.551 | 49.982 | 4.107 | 9.551 | 49.982 |
| 5 | 3.051 | 7.096 | 57.079 | 3.051 | 7.096 | 57.079 |
| 6 | 2.782 | 6.470 | 63.549 | 2.782 | 6.470 | 63.549 |
| 7 | 2.184 | 5.080 | 68.629 | 2.184 | 5.080 | 68.629 |
| 8 | 2.052 | 4.773 | 73.402 | 2.052 | 4.773 | 73.402 |
| 9 | 1.941 | 4.515 | 77.917 | 1.941 | 4.515 | 77.917 |
| 10 | 1.487 | 3.458 | 81.375 | 1.487 | 3.458 | 81.375 |
| 11 | 1.309 | 3.045 | 84.420 | 1.309 | 3.045 | 84.420 |
| 12 | 1.169 | 2.719 | 87.138 | 1.169 | 2.719 | 87.138 |
| 13 | .903 | 2.099 | 89.237 | | | |
| 14 | .828 | 1.927 | 91.164 | | | |
| 15 | .539 | 1.254 | 92.418 | | | |
| 16 | .496 | 1.155 | 93.573 | | | |
| 17 | .459 | 1.067 | 94.639 | | | |
| 18 | .392 | .911 | 95.550 | | | |
| 19 | .348 | .810 | 96.360 | | | |
| 20 | .304 | .708 | 97.068 | | | |
| 21 | .298 | .694 | 97.762 | | | |
| 22 | .248 | .576 | 98.337 | | | |
| 23 | .164 | .380 | 98.718 | | | |
| 24 | .120 | .279 | 98.996 | | | |
| 25 | .103 | .240 | 99.236 | | | |
| 26 | .091 | .212 | 99.448 | | | |
| 27 | .083 | .192 | 99.641 | | | |
| 28 | .059 | .136 | 99.777 | | | |
| 29 | .047 | .110 | 99.887 | | | |
| 30 | .027 | .064 | 99.951 | | | |
| 31 | .013 | .030 | 99.981 | | | |
| 32 | .008 | .019 | 100.000 | | | |
| 33 | 6.674E-16 | 1.552E-15 | 100.000 | | | |
| 34 | 4.329E-16 | 1.007E-15 | 100.000 | | | |
| 35 | 2.201E-16 | 5.118E-16 | 100.000 | | | |
| 36 | 1.686E-16 | 3.922E-16 | 100.000 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 37 | 9.397E-18 | 2.185E-17 | 100.000 | | | |
| 38 | -3.365E-17 | -7.826E-17 | 100.000 | | | |
| 39 | -1.317E-16 | -3.062E-16 | 100.000 | | | |
| 40 | -2.242E-16 | -5.213E-16 | 100.000 | | | |
| 41 | -3.211E-16 | -7.467E-16 | 100.000 | | | |
| 42 | -6.583E-16 | -1.531E-15 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

(Source: Survey data 2013)

In the above table, the Kaiser Normalization Criterion was used, which allows for the extraction of components that have an Eigen value greater than 1. The principal component analysis was used and 12 factors were extracted. As the table shows, these 12 factors explain 87.138% of the total variation. Component 1 contributed the highest variation of 15.074%. The contributions decrease as one move from one factor to the other up to factor 12.

**Table 4. 11: Component Matrix**

| | Component | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Trainee personality | .492 | -.057 | **.538** | -.064 | .351 | -.113 | -.323 | .096 | .034 | -.061 | .270 | -.113 |
| Trainee ability | .346 | -.051 | .358 | **.547** | -.207 | .376 | -.275 | .169 | .033 | .168 | .202 | .038 |
| Trainee motivation | -.439 | **.751** | -.138 | -.016 | .178 | .056 | .213 | -.001 | .269 | -.164 | -.075 | -.061 |
| Cognitive ability | .104 | .191 | .463 | **.542** | .075 | .251 | .161 | -.319 | -.195 | .131 | .044 | -.178 |
| Self-efficacy | -.271 | -.318 | **.523** | .376 | .127 | .238 | -.077 | .130 | .099 | .080 | -.277 | .331 |
| Active career management | .036 | .037 | -.575 | **.587** | -.063 | -.323 | -.014 | -.226 | .026 | .243 | -.021 | .026 |
| Agreeableness and extraversion | -.264 | **.684** | .071 | -.012 | .027 | .043 | .164 | .482 | .237 | .139 | .163 | -.113 |
| Career and job attitudes | **.583** | .120 | .455 | -.184 | -.366 | .095 | .063 | -.121 | .291 | -.131 | .100 | -.076 |
| Goal orientation | -.462 | **.698** | .054 | -.068 | -.248 | -.067 | .003 | .180 | -.290 | -.133 | .074 | -.058 |
| The extent of support in the organisation ( policies, reward systems and managerial behaviour) | -.026 | .232 | -.296 | -.067 | .122 | **.581** | -.252 | -.245 | .413 | -.174 | -.094 | .257 |
| The continuous learning culture | -.676 | -.307 | .081 | -.089 | -.109 | .229 | -.327 | -.115 | -.304 | .022 | **.636** | -.094 |
| The task constraints | .050 | .295 | -.126 | -.258 | .055 | .045 | .374 | **.754** | .213 | .311 | .349 | .155 |
| Organisational context and climate | **.628** | -.076 | .185 | .010 | .219 | -.007 | -.099 | .328 | -.266 | -.253 | .275 | -.110 |
| Situational cues and consequences | .302 | -.374 | .234 | -.278 | .290 | .154 | **.650** | .105 | .080 | .044 | -.270 | -.334 |
| Social support/ workgroup support | .278 | .400 | .015 | **.584** | .320 | .235 | .312 | -.028 | -.227 | -.302 | -.134 | -.049 |
| Supervisor's attitudes about the trainee | **.522** | .262 | .034 | -.488 | .227 | -.036 | .039 | .178 | -.103 | .365 | -.242 | -.025 |
| Opportunity to perform | -.234 | .157 | .537 | -.120 | **.581** | -.262 | .191 | .003 | .047 | -.039 | .189 | .213 |
| Skill decay over time | .407 | **.595** | .364 | .404 | .076 | -.071 | -.086 | -.097 | .029 | -.003 | -.133 | .151 |
| The kind of training facilities available. | **.525** | -.392 | .017 | .328 | .208 | -.101 | .244 | .059 | -.128 | -.086 | .317 | -.098 |
| Hardware environment | -.108 | .227 | -.123 | .000 | **.804** | .080 | -.319 | -.034 | -.153 | -.005 | -.161 | -.004 |
| Training facilities | -.421 | -.062 | -.250 | **.615** | -.289 | .031 | -.185 | -.132 | .169 | .025 | -.163 | -.203 |
| Site layout | -.261 | .156 | -.028 | .351 | -.241 | -.098 | **.508** | .116 | -.363 | .375 | .058 | .099 |
| Classroom climate | **.654** | -.009 | -.276 | .229 | .174 | .070 | -.007 | -.020 | -.154 | -.151 | -.384 | -.126 |
| Student involvement | .464 | .222 | -.303 | -.186 | -.203 | .040 | **.050** | -.040 | -.384 | -.328 | -.023 | .407 |
| Ambient conditions (sound, light, temperature, air) | **.579** | .237 | .444 | -.021 | .059 | -.075 | -.297 | .244 | -.059 | .200 | .006 | .210 |
| Learning principles | .117 | -.303 | -.069 | .195 | .105 | **.687** | -.041 | -.187 | -.070 | .042 | .114 | .388 |
| Developments in cognitive research | .052 | -.369 | .416 | -.078 | .426 | .221 | .067 | -.061 | .057 | **.767** | -.116 | .031 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Guidelines for effective training | -.296 | -.537 | -.038 | **.662** | .261 | -.197 | .233 | .309 | .331 | -.132 | -.055 | .189 |
| Sequencing | .465 | -.085 | -.411 | .045 | .375 | **.558** | .143 | .099 | -.108 | .058 | .299 | -.028 |
| Training Content | .345 | -.086 | .405 | .457 | -.238 | .429 | -.262 | .192 | **.672** | .012 | .138 | .193 |
| Framing of training/training approach | -.317 | **.699** | -.181 | -.045 | .268 | -.200 | -.295 | -.196 | .069 | .140 | -.055 | -.024 |
| Giving of multiple examples and non-examples of concepts in a variety of contexts | .104 | .223 | .358 | **.555** | .132 | -.245 | -.243 | -.431 | -.080 | .141 | .054 | -.320 |
| Providing inadequate practice time | -.517 | -.244 | .435 | **.643** | .268 | -.038 | .118 | .268 | .138 | -.115 | -.003 | .026 |
| Feedback mechanism | .266 | -.006 | -.650 | .251 | -.119 | .282 | .011 | **.656** | -.150 | .094 | -.025 | -.041 |
| Inadequate test designs | -.047 | .075 | -.481 | **.571** | -.192 | -.082 | .447 | -.034 | .297 | -.089 | -.066 | -.006 |
| Provision of additional or supportive guidance on using the skills back on the job | -.121 | **.694** | .060 | -.031 | -.050 | -.116 | -.115 | .390 | .426 | .179 | .007 | -.060 |
| Knowledge of the subject matter | **.583** | .120 | .455 | -.184 | -.366 | .095 | .063 | -.121 | .291 | -.131 | .100 | -.076 |
| Professional experience | -.350 | **.638** | .110 | -.003 | -.199 | .312 | .087 | .028 | -.443 | .172 | .000 | .119 |
| Knowledge of teaching principles (such as adult learning strategies) | -.154 | .234 | -.317 | .109 | .431 | **.564** | .160 | -.261 | .077 | -.089 | .263 | .078 |
| Good communication and delivery skills | -.770 | -.294 | .117 | -.030 | -.037 | **.638** | -.218 | -.227 | .042 | -.041 | .119 | -.005 |
| Ability to motivate and engage learners | .286 | .073 | **.630** | .042 | .119 | -.268 | -.067 | .013 | -.042 | -.238 | .241 | -.201 |
| Feedback about performance | .252 | **.640** | .281 | .275 | .093 | -.255 | -.080 | .005 | -.047 | -.275 | -.116 | .072 |

Extraction Method: Principal Component Analysis.

(Source: Survey data 2013)

The initial component matrix was rotated using Varimax (Variance Maximization) with Kaiser Normalization. The above results allowed for the identification of which variables fall under each of the 12 major extracted factors. Each of the 42 variables was looked at and placed to one of the 12 factors depending on the percentage of variability; it explained the total variability of each factor. A variable is said to belong to a factor to which it explains more variation than any other factor. All items except one in the 12 factors identified had factor loadings above the *cut-*

*off* value (*0.4*) impressing their importance and meaningfulness to the factors in the light of recommendations by Hair *et al.* (1998).

### 4.6 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 17.0) to code, enter and compute the measurements of the multiple regressions

**Table 4. 12: Multiple regression results of dependent variable and the independent variables**

| Model | R | R Square | Adjusted R Square | Standard Error of the Estimate |
|---|---|---|---|---|
| 1 | .824 | .679 | .658 | .1042 |

a. Predictors: (Constant), trainee characteristics, environment, training design, trainer characteristics.

(Source: Survey data 2013)

R-Square (coefficient of determination) is a commonly used statistic to evaluate model fit. R-square is 1 minus the ratio of residual variability. The adjusted $R^2$, also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. Thus 65.8% of the changes in the transfer of training variables could be attributed to the combined effect of the predictor variables.

**Table 4. 13: ANOVA regression analysis results between ownership and predictor variables**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 12.223 | 3 | 3.112 | 3.671 | .001 |
| | Residual | 92.876 | 65 | .641 | | |
| | Total | 115.099 | 68 | | | |

a. Predictors: trainee characteristics, environment, training design, trainer characteristics.

b. Dependent Variable: transfer of training.

(Source: Survey data 2013)

The probability value of 0.001 indicates that the regression relationship was highly significant in predicting how trainee characteristics, environment, training design, trainer characteristics influenced transfer of training. The F critical at 5% level of significance was 3.671 since F calculated is greater than the F critical (value = 2.830), this shows that the overall model was significant.

**Table 4. 14: Regression coefficients relationship of dependent variable and the independent variables**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | 2.770 | 0.451 | | 4.307 | 0.000 |
| | Trainer Characteristics | +0.691 | 0.095 | 0.0152 | 3.107 | 0.006 |
| | Trainee characteristics | +0.432 | 0.121 | 0.146 | 3.333 | 0.028 |
| | Training design | +0.533 | 0.079 | 0.126 | 3.214 | 0.025 |
| | Environment | +0.348 | 0.073 | 0.045 | 3.329 | 0.032 |

a. Dependent Variable: transfer of training

(Source: Survey data 2013)

The regression equation above has established that taking all factors into account (trainer characteristics, training design, environment, and trainee characteristics) constant at zero transfer of training will be 2.770. The findings presented also show that taking all other independent variables at zero, a unit increase in trainer characteristics would lead to a 0.691 increase in the transfer of training. A study conducted by Brown and McCracken (2009) found that within the transfer influences category, 14% of the responses described specific attributes of trainers that are important to supporting training transfer. They labeled them trainer characteristics and defined this subcategory as a trainer's knowledge of the subject matter, professional experience, and knowledge of teaching principles (such as adult learning strategies) as important in supporting training transfer.

The results also show that a unit increase in training design would lead to a 0.533 increase in the transfer of training. According to Baldwin and Ford (2008) proposed a model of factors in the training process that can affect transfer. According to this model, transfer will be enhanced when the training design includes identical elements, the general principles of a skill are taught, a variety of stimulus conditions are presented in the training to increase generalizability, and, generally, distributed training practices are used.

The findings shows that a unit increases in trainee characteristics would lead to a 0.432 increase in transfer of training. Trainee characteristics such as personality, trainee ability, and motivation effects were originally identified by training practitioners as factors affecting transfer of training (Baldwin and Ford, 1988).Mumford *et al* (2009) revealed trainee characteristics such as aptitude and motivational levels were among the most consistent predictors of trainee performance, stronger even than course content variables.

In addition, the findings show that a unit increase in environment would lead to a 0.348 increase in transfer of training .Tannenbaum and Yukl (2002) define climate as perceptions of the environment that evolve out of interaction among organisational members. An organisational climate is said to exist when a group of individuals share a common perception of the work context. Overall, trainer characteristics had the greatest effect on transfer of training followed by training design, then trainee characteristics while the environment had the least effect. Recently, several studies have confirmed that trainee's motivation to attend training and to learn, affects their level of skill acquisition, retention, and willingness to transfer learning to the workplace (Martocchio and Webster 2008, Mathieu *et al* 2010). Further, Quinone (2007) suggests the most important aspect of framing is for organisations to be aware of how information can be perceived and interpreted.

At 5% level of significance and 95% level of confidence, trainer characteristics had a 0.006 level of significance, training design had a 0.025 level of significance, trainee characteristics had a 0.028 level of significance, environment had a 0.032 level of significance, hence the most significant factor is trainer characteristics.

# CHAPTER FIVE

# SUMMARY, CONCLUSION AND RECOMENDATIONS

## 5.1 Introduction

This chapter presents a discussion of the findings, and conclusions drawn from the findings and finally recommendations for practice and further research on the problem. This study aimed at establishing the factors affecting transfer of training within military officers' training in the Ministry of State for Defence, Kenya.

## 5.2 Summary

A common experience is that learning from a formal training program is not carried back for application on the job. After that kind of training it's important to assess whether transfer of training has taken place during the use of actual aspects and accessories and equipment. The purpose of the study was to find out the factors affecting transfer of training within military officers' in the Ministry of State for Defence, Kenya. The study sought to determine whether trainee characteristics, environment, training design and trainer characteristics on transfer of training in the Ministry of State for Defence. The study found that staff at the Army headquarters offices and trainers was directly involved in training. Majority were currently undertaking training. They applied the acquired skills in the actual work situation.

The study found that self-efficacy and career and job attitudes affected transfer of training to a very great extent. In addition, trainee personality, goal orientation, agreeableness and extraversion and trainee ability affected transfer of training to a great extent. Moreover, goal orientation, trainee motivation, active career management and cognitive ability affected transfer of training to a great extent.

The study found that the task constraints, the extent of support in the organisation (policies, reward systems and managerial behaviour) and organisational context and climate affected transfer of training to a great extent. In addition, the continuous learning culture, social support/ workgroup support, opportunity to perform and situational cues and consequences affected transfer of training to a great extent. Moreover, supervisor's attitudes about the trainee and skill decay over time affected transfer of training to a moderate extent.

The study found that the kind of training facilities available affected transfer of training to a very great extent. In addition, hardware environment, training facilities and site layout affected transfer of training to a great extent. Moreover, ambient conditions (sound, light, temperature, air) and student involvement affected transfer of training to a great extent. To add, classroom climate affected transfer of training to a low extent.

The study found that provision of additional or supportive guidance on using the skills back on the job, training content and guidelines for effective training affected transfer of training to a very great extent. In addition, framing of training/training approach, developments in cognitive research and providing inadequate affected transfer of training to a very great extent as shown by a mean of practice time. Moreover, inadequate test designs, sequencing, giving of multiple examples and non-examples of concepts in a variety of contexts and learning principles affected transfer of training to a great extent. To add, feedback mechanism affected transfer of training to a moderate extent.

The study found that knowledge of the subject matter and professional experience affected transfer of training to a very great extent. In addition, feedback about performance, ability to motivate and engage learners, good communication and delivery skills and knowledge of

teaching principles (such as adult learning strategies) affected transfer of training to a great extent.

### 5.3 Conclusion

The study concludes that trainee characteristics such as personality, trainee ability, and motivation effects were originally identified by training practitioners as factors affecting transfer of training. In a training situation, trainees with strong belief that they can control the provision of organizational outcomes are more likely to facilitate application of training content on their jobs. Such outcomes can be recognition, promotions, salary increase and job enlargement. It is clear that trainees with a high level of confidence in attaining anticipated performance and behavior change will be more likely to apply what they have learned from training on the jobs. The study also concludes that the operation of a self-fulfilling prophecy in the context of a leader-member exchange relationship. How much the trainee was liked and the perceived potential for the trainee and workgroup support are important in establishing how much of an opportunity the trainee had to perform trained tasks on the job. Social support, opportunity to perform and situational cues and consequences affected transfer of training.

The study concludes that cultural commitment to learning often takes more specific forms –as an incentive to apply new skills ,time or resource allowance to apply them, the cultivation of a supervisor or peer support network, and clear policies on the importance of continuous learning. Workplace design contributes to organizational effectiveness in two important ways: it directly supports work tasks (that is, work quantity, and quality and style of work) and it acts as a catalyst for organizational outcomes (for example, absenteeism and turnover). The study finally concludes that the quality and depth of learning depend on the characteristics of the design and delivery of the training. Transfer is enhanced when the training design includes identical

elements, the general principles of a skill are taught, a variety of stimulus conditions are presented in the training to increase Generalisability, and, generally, distributed training practices are used.

**5.4 Recommendations**

The study recommends the trainees need to have high level of confidence so as to attain anticipated performance. They should be strong in self-efficacy and focus on the demands of a situation. The organization need to engage trainees in cognitive or environmental search activities. This will enable them have better understanding of their strengths, weaknesses and interests and they recognize the importance of learning new skills. Trainees should have a high level of organizational commitment.

It is important for the Ministry of State Defense to create an environment that supports the transfer of newly trained officers to the work environment. The supervisor's attitudes towards the trainee should be positive. Supervisors need to support workgroup by establishing how much of an opportunity the trainee has to perform trained tasks on the job. The organization need to encourage trainees to update the technical knowledge and skills and personal growth. Supervisors and peers should provide trainees with opportunities for practicing new skills and knowledge in the job setting. A strong learning culture should be encouraged. Trainee should be encouraged to use situational cues and consequences of their training on their return to the job. Organizations should be active in ensuring training content matches expectations. Organizations to think hard about the information they communicate to trainees. Organizations need to be aware of how information can be perceived and interpreted.

The study recommends the training branch in Ministry of State Defence to update the design and delivery system of the training in line with current developments. Transfer should be enhanced

by including identical elements, the general principles of a skill taught, a variety of stimulus conditions presented in the training to increase generalizability, and, generally, distributed training practices. Active learner participation in the training should be encouraged. Unlimited practice opportunities need to be provided to trainees. Cultural commitment to learning should be encouraged in the organization.

Since trainee characteristics were found to have a great effect on transfer of training, the study recommends that the Ministry of State Defence should take into considerations the variety of different training needs in the design of training programs. Trainers need to use interesting material to spice up their teaching. The trainer needs to have opportunity to provide additional or supportive guidance on using the skills back on the job.

**5.5 Suggestions for Further Research**

A similar study could be carried out in other organizations to find out whether the same results will be obtained. The study focused on the military thus another study should be carried out in other institutions such as government ministries and parastatals and also private institutions to find out if the same results will be obtained and to allow for comparison.

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## APPENDICES

### Appendix I: Introduction letter

Geoffrey O. Misiani,

Kenyatta University,

P.O. Box 43844-00100,

Nairobi, Kenya.

The Ministry Of State for Defence,

Ulinzi House,

P.O. BOX 40668-01000,

Nairobi, Kenya.

**RE: INTRODUCTION LETTER**

Dear Sir/ Madam,

I am an MBA student at Kenyatta University. I intend to carry out a research on factors affecting transfer of training within military officers' training. Your institution has been identified as a rich source of information. I therefore request you to allow me to collect data required for the study from your area of jurisdiction .The information provided was confidential and was only used for academic purpose.

Thanks in advance.

Yours faithfully

Geoffrey O. Misiani

**Appendix II: Questionnaire**

**FACTORS AFFECTING TRANSFFER OF TRAINING WITHIN MILITARY OFFICERS' TRAINING IN THE MINISTRY OF STATE FOR DEFENCE, KENYA.**

The purpose of this questionnaire is to help collect data for an MBA project in Kenyatta University. All respondents and information provided will be treated as confidential.

Respondent no.....

**SECTION A: Background of respondents**

Please answer the following questions by placing a tick ( ) where necessary in the spaces provided

1. What is your age?

| | | | |
|---|---|---|---|
| 18 - 25 | [ ] | 26 – 35 | [ ] |
| 36 – 45 | [ ] | 46 – 55 | [ ] |
| 56 and above | [ ] | | |

2. What is your gender? Male [ ] Female [ ]

3. What is your highest academic qualification?

| | | | |
|---|---|---|---|
| KCPE | [ ] | KCSE | [ ] |
| Certificate | [ ] | Diploma | [ ] |
| Bachelors degree | [ ] | post graduate | [ ] |

4. Which other professional training do you have?.....
5. What is your designation /rank?.....

6. How many years have you served in the Defence Forces?

| | | | |
|---|---|---|---|
| Less than 1 year | [ ] | 1-5 years | [ ] |
| 6-10 years | [ ] | 11-15 years | [ ] |
| More than 15 years | [ ] | | |

**SECTION B: MILITARY TRAINING FOR OFFICERS**

7. a) Are you directly involved in training?

Yes [ ] No [ ]

b) If yes, state your role.....

8. i) Are you currently undertaking any form of training?

Yes [ ] No [ ] .

ii) To what extent do you apply the acquired skills in the actual work situation?

Fully [ ] partial [ ]

**SECTION C: Factors affecting transfer of training**

9. The following table indicates various factors that affect transfer of training in courses undertaken by military officers. You are required to express your opinion on the extent that each affect the transfer by placing a tick in appropriate columns named

VGE (5) = very great extent GE (4) = Great extent ME (3) = Moderate extent LE (2) = Little extent NEA (1) = No extent at all

| **Factors affecting transfer of training** | VGE (5) | GE (4) | ME (3) | LE (2) | NEA (1) |
|---|---|---|---|---|---|
| **Trainee characteristics** | | | | | |
| Trainee personality | | | | | |
| Trainee ability | | | | | |
| Trainee motivation | | | | | |
| Cognitive ability | | | | | |
| Self-efficacy | | | | | |
| Active career management | | | | | |
| Agreeableness and extraversion | | | | | |
| Career and job attitudes | | | | | |
| Goal orientation | | | | | |
| **Work environment** | | | | | |
| The extent of support in the organisation ( policies, reward systems and managerial behaviour) | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| The continuous learning culture | | | | | |
| The task constraints | | | | | |
| Organisational context and climate | | | | | |
| Situational cues and consequences | | | | | |
| Social support/ workgroup support | | | | | |
| Supervisor's attitudes about the trainee | | | | | |
| Opportunity to perform | | | | | |
| Skill decay over time | | | | | |
| **Training Environment** | | | | | |
| The kind of training facilities available. | | | | | |
| Hardware environment | | | | | |
| Training facilities | | | | | |
| Site layout | | | | | |
| Classroom climate | | | | | |
| Student involvement | | | | | |
| Ambient conditions (sound, light, temperature, air) | | | | | |
| **Training design** | | | | | |
| Learning principles | | | | | |
| Developments in cognitive research | | | | | |
| Guidelines for effective training | | | | | |
| Sequencing | | | | | |
| Training Content | | | | | |
| Framing of training/training approach | | | | | |
| Giving of multiple examples and non-examples of concepts in a variety of contexts | | | | | |
| Providing inadequate practice time | | | | | |
| Feedback mechanism | | | | | |
| Inadequate test designs | | | | | |
| Provision of additional or supportive guidance on using the | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| skills back on the job | | | | | |
| **Trainer Characteristics** | | | | | |
| Knowledge of the subject matter | | | | | |
| Professional experience | | | | | |
| Knowledge of teaching principles (such as adult learning strategies) | | | | | |
| Good communication and delivery skills | | | | | |
| Ability to motivate and engage learners | | | | | |
| Feedback about performance | | | | | |

10. Rank the following factors in a scale 1-5. 1- Most important, 5- least important showing the extent the factors that affect transfer of training.

| FACTORS | RANK |
|---|---|
| Trainee characteristics | |
| Work environment | |
| Training environment | |
| Training design | |
| Trainer characteristics | |

11. In your opinion what should be done to improve transfer of training in the Defence Forces training?

.....

.....

.....

THANK YOU VERY MUCH FOR YOUR CO-OPERATION